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*Edward Matthey.*

GUILLET







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# Gentleman's Dictionary.

~~Letter~~

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Printed for H. Bonwicke in St. Paul's Church-Yard;  
T. Goodwin, M. Wetton, B. Tooke, in Fleetstreet; and  
S. Manship in Cornhill. 1705.





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T H E

Publishers P R E F A C E.

**T**H E *Sieur Guillet* having published in French, *Les Arts de l'Homme d'Epee*, in the Form of a Dictionary, in Three distinct Alphabets; which has now born Sixteen Impressions in a few Years; we thought it would be acceptable to the Publick, to make it speak English. But finding 'twas capable of many Improvements, and was altogether accommodated to the French Customs and Actions; we chose, instead of a bare Translation, to take in such Improvements and Corrections, as were handed to us by Persons thoroughly vers'd in the respective Arts; and to make such Alterations, as would better suit the Customs and History of England.

The General Design of this Work, is to serve not only those who are bred to the Sword, but all



# The Publishers P R E F A C E.

*that pretend to a Gentlemanlike Education; and at the same time to gratify the Curiosity of others, who will, doubtless, be fond of knowing the true Import of such Terms and Phrases, as are daily met with in Common Discourse, and are usually tack'd to the Busiest Actions of Life; Now that England is retriev'd from Luxury and Softness, and once more fam'd for Manly Exercises and Actions.*

*The Alphabet which leads the Van in this Performance, explains all that relates either to a Horse, or a Horseman. It includes not only the Definitions of Things and Phrases used in the Manage, or Academies for Riding; but likewise the Terms relating to the Condition, Use, Feeding, and Treatment of a Horse; to the Diseases of Horses, and the usual Remedies, with the manner of giving 'em; and, in fine, to all the Appurtenances of that Useful Animal. In compiling this Part, the Sieur Guillet made use of the Assistance of Messieurs de Bournonville, and du Plessis, (both Riding-Masters to the Dauphin of France) and above all, of Mr. Solleyfel, the Excellent Author of the Compleat Horseman; to which our Reader is frequently referr'd. In translating this Part, we have taken care to do Justice to the French, and at the same time to bring it as near to our Jockey Terms, as the Nature of the Thing would allow.*

# The Publisher's P R E F A C E.

The Second Part ranges the Military Terms in an Alphabetical Order; most of which are Illustrated with particular Phrases, pointing to the Famous Instances of English Bravery and Conduct; especially those which late Years have produced. The Sieur Guillet's Illustrations were all taken from the Actions of the French, which we chose to Exchange for English: And at the same time we thought it not improper to give new Definitions of many Terms, pursuant to the present Practice of our own Armies and Engineers; as well as to add a great many useful Things that were either invented out of France, or brought to Light since the Sieur Guillet writ. To render this Part yet more Instructive, we have Inserted Accurate Cuts of the Engines, Instruments, Contrivances, &c. us'd in War; and have prefix'd to it a General Draught of all the Parts of Fortification, and the Method of Approaches in Sieges; which we take to be the distinctest and justest that has yet appear'd. In fine, the Reader will find this Part altogether new moulded; which is owing to the Care and Capacity of a Gentleman, who is perfectly well vers'd in all the Arts retaining to the Military Profession, and was an Eye-Witness of all the Actions of our Army, in this and the last War.

As for the Third and Last Part, relating to Navigation, we have Calculated the Sea-Terms  
and



# The Publisher's P R E F A C E.

and Phrases, the Parts and Materials of Ships, and all the other Terms of Art, according to the English Practice of Navigation, and ways of Speaking: And have thrown in Historical Instances of the English Naval Exploits: which all the World knows to surpass those of other Nations, both in Glory and Number. To this Part we have prefix'd an exact Draught of a Ship compleatly Rigg'd, with Explicatory References to all its Parts, Ropes, &c. And in fine, we reckon we may, without Vanity, affirm, That in this, as well as the Second Part, we have far out-done our Original.

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T H E

T H E  
Gentleman's Dictionary.

P A R T I.

The Manage : Or the Art of Riding.

In the ensuing Alphabet the Terms are ranged in an Alphabetical Order : And in regard the manner of applying is not less necessary than their Explication, you have particular Phrases tack'd to the most essential Words ; and those so contriv'd, that they not only shew in what manner these Terms should be employed in a regular way of speaking, but likewise lay open the Grounds of the Matter in hand.

The Definition of the Art of Riding.

*The Art of Riding teaches at once how to form both the Horseman and the Horse : The former it teaches a good Seat upon Horseback, a free, easy, disengaged Posture, and the means of making his Hand accord with his Heels : The Horse it instructs, as much as is possible, how to carry well, to take his Aids gentle and fine, to fear the Corrections that can fix him to a Walk, a Trot, and a Gallop, and then to manage or work upon all sorts of Airs ; that thus broken and managed, he may be of Use in the Dangers of War, in the Necessities of Life, and sometimes in the Pomp and Splendor of Festivals and Publick Shews.*

A B A

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**A** B A T E ; A Horse is said to abate or take down (*Rabattre*) his Curvets, when working upon Curvets he puts his two Hind-legs to the ground both at once, and observes the

same exactness in all the times. Your Horse abates his Curvets very well ; for in regard he *harps* or *grapples* with his two Hams, and in working keeps his Legs very low, he abates his Curvets with a good Grace ;

A

that



that is, his two hinder Feet touch the ground together.

**ACTION** of the Mouth is the Agitation of the Tongue and the Mandible of a Horse, that by champing upon the Bridle, keeps his Mouth fresh. You see by this white ropy Foam, that this Horse has the *Action* of the Mouth; which is a sign of Vigour, Mettle, and Health.

**ACULER**; a *French* Word us'd in the Academies, importing, that a Horse in working upon Volts in the Manage, do's not go far enough forwards at every Time or Motion, so that his Shoulders embrace or take in too little ground, and his Croupe comes too near to the Center of the Volt. This Horse has *aculé*, because the Horseman did not turn his hand, and put him on with the Calf of his inner Leg. Horses have a natural Inclination to this Fault, in making Demivolts. When the *Italians* work a Horse upon the Demivolts; call'd *Repolons*, they affect to make 'em *aculer*, or cut short. See *Entabler*, and *Repolon*.

**AGE** of a Horse, is the Space of Time elapsed since he was foal'd: Which deserves a very particular regard, upon the account that a Horse has the advantage of being capable to shew and set forth the different Progress of his first Years; partly by the Number of his Teeth, according as he casts or

shoots 'em forth one after another, or as these change and give place to fresh ones; partly by black Specks or Marks placed by Nature upon some of 'em; and partly by some other Presumptions of less Certainty, such as those taken from the Knots or Joynts of the Tail. The Youngest of these Horses can't be above Two Years and a Half old; for he is now but Casting his Nippers. The other that's a Casting his Middling Teeth, is between Three and a Half and Four Years. And the third, that now puts forth his Tusshes, and whose Corner-Teeth are upon the point of appearing, must be about Four Years old. But as for that *Old-English* Horse, his Age is counterfeited; he has had Tricks play'd with his Teeth: You see by his Corner-Teeth that are so Long, and Clear of Flesh, that he's certainly countermark'd; And tho' it would seem as if he had not yet ras'd, and were not yet Seven Years old, he begins to feel. See *Teeth*, *Shell-tooth'd*, *Tail*, *Raze*, and *Secl*.

**AID**; to Aid, Assist, or Succour a Horse, is to sustain and help him to work true, and mark his Times or Motions with a just Exactness. Assist your Horse with the Calves of your Legs; help him with a nice tender Heel; aid him with your Tongue. 'Tis not enough to aid this Horse with  
the



the Rod, he must have harsher *Aids*.

*Aids* are the Helps or Assistance that the Horseman gives from the gentle and moderate Effects of the Bridle, the Spur, the Cavesson, the Poinson, the Rod, the Action of the Legs, the Motion of the Thighs, and the Sound of the Tongue. We give these *Aids* to prevent the Correction or Chastisement that is sometimes necessary in Breaking and Managing a Horse. You'll never ride well, unless you be very attentive and active without precipitancy, in not losing or missing your Times, and in giving the *Aids* seasonably: For without that, you'll accustom your Horse to dose upon it. If this Horse does not obey the *Aids* of the Calves of his Legs, help him with the Spur, and give him a prick or two. This Sorrel-Horse has his *Aids* very nice; that is, he takes them with a great deal of Facility and Vigor. This Gentleman gives his *Aids* very fine; that is, he animates and rouzes up the Horse seasonably, and helps him at just Turns, in order to make him mark his Times or Motions justly. This Barb knows the *Aids*; he obeys or answers the *Aids*; he takes them fine. You do not give the *Aids* of the Cavesson with discretion; you make a Correction of 'em, which will baulk your Horse. See *Brouiller*.

*Inner Aids, Outer Aids.* See *Inside, Enlarge, and Narrow*.

**A I R** is a Cadence and Liberty of Motion accommodated to the natural Disposition of the Horse, which makes him work in the Manage, and rise with Obedience, Measure, and Justness of Time. Some Riding-Masters take the word *Air* in a strict Sense, as signifying a Manage that's higher, slower, and more artful or design'd than the *terra a terra*. But others give it a larger Signification, including under that sense a *terra a terra*; for if a Horse manages well in a *terra a terra*, they say the Horseman has happily hit the Air of the Horse. In general, the Walk, Trot, and Gallop, are not accounted *Airs*. And yet some very good Riding-Masters would understand by *Air* the Motion of a Horse's Legs upon a Gallop. For instance, they'll say such a Horse has not the natural Air; that is, in galloping he bends his Fore-legs too little. You should give or form an Air to your Horse, for he has no natural Air; and since his Haunches are very good, he's capable of the Manage, if you do but learn him an Air. All your Horses have an Air naturally; that is, they have Motion enough with their Fore-legs to take a Cadence, if they're put to work at *terra a terra*. This Horse always takes his Lesson with his own Air. Fix or confirm that Horse in



the Air he has taken. This Sorrel takes the Air of the Curvets; but that presents himself with an Air for *Caprioles*. This Mare has no Inclination nor Disposition to these Airs. See *Pesate*.

*High Airs* or High Manage, are the Motions of a Horse that rises higher than *terra a terra*, and works at Curvets, Balotades, Croupades, and Caprioles. In regard that Horse has the Beginning or first Steps of rais'd Airs, and of himself affects a high Manage, you ought to use this his Disposition discreetly, that he may not be dishearten'd or baulk'd; for your high Airs make a Horse angry when he's too much put to't; and you ought to have suppl'd his Shoulders very well before you put him to leap. See *Pesate*, and *Leaping*.

A M B L E, is the Going or Pace of a Horse; the Motion of which is two Legs of a side rais'd and set down together, after which the two Legs of the other side rise and come down in the same manner; each side observing an alternate Course. The first Pace of young Colts or Foals is the Amble; but they quit it as soon as they have strength enough to trot. You have done in your Breed what is commonly practis'd in *England*; for to put your Horse upon an Amble, you have put Locks upon 'em, and Wisps of Hay round the Pasterns of their

hinder Legs: But at the same time you did not consider that there's no such thing as an Amble in the Manage, and that the Riding-Masters allow of nothing but Pace, Trot, and Gallop: And the reason they give for it, is, That they can put a Horse from a Trot to a Gallop without stopping him; but can't pass from an Amble to a Gallop without a stop, which loses time and interrupts the Justness and Cadence of the Manage.

*Amble free*; A Horse is said to amble free that goes a good Amble when led by the Halter in one's hand.

*Amble broken*. See *Aubin*.

A N T I C O R (or *Avant-Coeur*) is a preternatural Swelling of a round Figure, almost as big as the half of one's fist, which being occasioned by a Sanguine and Bilious Humour, appears in a Horse's Breast, opposite to the Heart. Your Horse has got an *Anticor* that may kill him unless you bring it to Suppuration by good Remedies. But the *Anticor* that's upon my *English* Horse do's not trouble me at all; for the Swelling lessens upon the Suppuration, which is a good sign. See *Grass*.

A N V I L is a Mass of Iron, sometimes forged with a Hammer; the upper part of which is cover'd with Steel-solder'd, in order to forge upon it either cold or hot; the soft and pliable

pliable Iron, such as that of *Spain* and *Turkey*, being work'd in the former, and the harder Iron in the latter Method. Your forged Anvils are preferable to those that are cast; and the extremities both of the one and the other terminate in little rais'd Anvils, which serve for rounding Horse-Shoes.

A P P U I or *Stay* upon the hand, is the reciprocal Sense between the Horse's Mouth and the Bridle-hand; or the Sense of the Action of the Bridle in the Horseman's hand. The true and right *Appui* of the Hand is the nice Bearing up or Stay of the Bridle; so that the Horse aw'd by the Sensibility and Tenderness of the Parts of his Mouth, dare not rest too much upon the Bitt-mouth, nor chack or beat upon the hand to withstand it. Such a Horse has a dull deaf *Appui*; that is, he has a good Mouth, but his Tongue's so thick that the Bitt can't work or bear upon the Bars: For the Tongue being not sensible or tender, as the Bars, is benum'd or harden'd by the Bitt, and so the *Appui* is not good. The Bitt do's not press the Bars in the quick, by reason of the Grossness of the Tongue, or else of the Lips. Your Horse has a Rest or Stay that forces the hand; which shews that he has a bad Mouth. This Horse has no *Appui*, no Rest upon the hand; that is, he dreads the Bit-

mouth; he's apprehensive of the hand; and he can't suffer the Bitt to press or bear tho' never so little upon the Parts of the Mouth; and thus it comes to pass that he do's not easily obey the Bridle.

A Horse who is taught a good *Appui*. If you mean to give that Horse a good Rest upon the Hand, it behoves you to gallop him, and put him often back: A Long-stretch Gallop is likewise very proper for the same end, for in galloping, he gives the Horseman an opportunity of bearing him upon the Hand. Such a Horse has too much *Appui*, he throws himself too much upon the Bitt. A Horse that has a Fine Stay or Rest upon the Hand, *i. e.* equal, firm and light, or one that obeys the Bridle. See *Hand*.

A Full *Appui* upon the Hand, is a Firm Stay, without resting very heavy, and without bearing upon the Hand. Horses for the Army ought to have a Full *Appui* upon the Hand.

A more than Full Rest or *Appui* upon the Hand, is said of a Horse that's stop'd with some force, but still so that he does not force the Hand. This *Appui* is good for such Riders as depend upon the Bridle instead of their Thighs.

A R C H'D. A Horse is said to have Arch'd Legs, when his Knees are bended archwise. This Expression relates



to the Fore-quarters, and the Infirmary here signified happens to such Horses as have their Legs spoil'd with travelling. The Horses call'd *Brassicourts* have likewise their Knees bended archwise, but this Deformity is natural to them.

**A R M** of a Horse. See *Fore-Thigh*.

**To Arm.** A Horse is said to Arm himself when he presses down his Head as if he would *Chock*; and bends his Neck so as to rest the Branches of the Bridle upon his Counter, in order to disobey the *Bitt-mouth*, and guard his Bars and his Mouth, which are reliev'd by over bending the Neck. Since your Horse Arms himself, give him a Knee'd Branch, that will raise him, and make him carry his Head well. See to *Carry low*.

*Arm with the Lips.* A Horse is said to Arm himself with the Lips, when he covers his Bars with his Lips, and makes the pressure of the Bitt too deaf and firm; this is commonly done by Thick-lip'd Horses: You must order your Bitt-maker to forge you a Bitt-Mouth with a Canon or Scratch-Mouth that's broader near the Bankets than at the place of its pressure or rest upon the Bars; and this will hinder your Horse to Arm himself with his Lips. Sometimes we say, the Lip arms the Barr, *i. e.* covers or screens it. See *Disarm*.

*Armand.* See *Drench*.

**A R R E S T S** are Mangy Humours upon the Sinews of the Hinder-legs of a Horse, between the Ham and the Pastern; they seldom appear upon the Shank-Sinew. Their Name is taken from their likeness to the Arrests or Small Bones of a Fish. See *Rat-tail*.

**A R Z E L**, A Horse is said to be Arzel that has a White Mark upon the Far-foot behind. Your Superstitious *Cavaliers* persuade themselves that by an unavoidable Fatality such Horses are unfortunate in Battels; and such is the strength of this Prejudice, that they do not care to use 'em.

**A S S I S T.** See to *Aid*.

**A T T A I N T**, is a Blow or Wound receiv'd by a Horse in his Hinder-feet, from another Horse that follows him too close: This Word is likewise us'd to signify a Blow that a Horse's Foot receives from the Fore or Hinder opposite Foot; or a Blow given by one of the Hinder-feet striking against the Cronet of the Fore-foot. Your Horse could not have given himself a Ruder Attaint, for I find with the Probe, that it penetrates between the Hoof and the Coffin-Bone; which gives reason to suspect that the Tendon is affected, and that the Attaint reaches to the Cronet.

*Upper-Attaint*, is a violent Blow given with the Toe of the Hind-feet, upon the Sinew of the Fore-legs.

AUBIN, is a Broken Going, or Pace of a Horse, between an Amble and a Gallop, which is not esteemed.

AVERTI: A French Word us'd in the manage, as applied to the Pace or Motion of a Horse; signifying a Motion that's injoin'd, regulated and requir'd in the Lessons. *Pas Ecoute*, and *Pas d'Ecole* (i.e. listening Paces, or School Paces) signify the same thing.

## B.

BACK, or *Reins* of a Horse. Such a Horse has Vigor in his Back; he goes upon his Fillets, he has good Loyns. A Horse that works in the Manage upon his Loins, is one that lowers his Hips and his Neck, and raises his Fillets. A Weak-back'd Horse is apt to stumble. Such a Horse defends himself with his Back, he leaps and plays with his Fillets, and doubles his Reins to incommode the Rider.

Back of a Horse. To Mount a Horse *a dos* (in French) is to Mount him Bare-back, or without a Saddle.

BALOTADES, are the Leaps of a Horse between two Pillars, or upon a Straight Line, made with Justness of Time, with the Aids of the Hand, and the Calves of the Legs; and that in such a manner, that when his Fore-feet are in the

Air, he shews nothing but the Shoes of his Hinder-feet, without yerking out. Thus 'tis that the Air or Manage of *Balotades* differs from *Caprioles*, for a Horse that works at *Caprioles*, yerks or strikes out his Hinder-Legs with all his force, keeping them near and even. *Balotades* differ likewise from *Croupades* in this; that in the former the Horse shews his Shoes, when he lifts or raises his Croup, but in *Croupades* he draws his Hinder-feet under him. Your Horse will take to *Balotades*, when you let him go upon *Caprioles*; for when the great Fire and Mettle of the *Caprioles* is past, Horses take to *Balotades* of themselves, and then to *Croupades*, unless a *Poinson* in a Hard Hand makes 'em yerk out, and continue the Air of *Caprioles*. See *Yerk*.

To make a Cross upon *Balotades*. See *Cross*.

BALZANE. See *White-foot*.

BANDS of a Saddle, are Two Pieces of Iron, Flat, and Three Fingers Broad, nail'd upon the Bows of the Saddle, one on each side, contriv'd to hold the Bows in the Situation that makes the Form of the Saddle. To put a Bow in the Band, is to Nail down the Two Ends of each Band to each side of the Bow. Besides these Two Great Bands, the Fore-bow has a Small one, call'd the Wither-Band, and a Crescent to keep



up the Wither-Arch. The Hinder-Bow has likewise a small Band to strengthen it.

**BANQUET**, is that small part of the Branch of a Bridle that's under the Eye, which being rounded like a Small Rod, gathers and joins the Extremities of the Bitt to the Branch, and that in such a manner, that the Banquet is not seen, but cover'd by the Cap, or that part of the Bitt that's next the Branch.

*Banquet-Line*, is an Imaginary Line, drawn by the Bitt-makers along the *Banquet*, in forging a Bitt, and prolong'd upwards and downwards, to adjust the design'd Force or Weakness of the Branch, in order to make it stiff or easie; for the Branch will be hard and strong, if the Sevil-hole is on the outside of the Banquet-line, with respect to the Neck; and the Branch will be weak and easie, if the Sevil-hole is on the inside of the Line, taking the Center from the Neck. See *Branch* and *Shoulder*.

**BARB**, is a Horse brought from *Barbary*: Such Horses are commonly of a Slender Light Size, and very Clean and Thin in the Legs. Your *Spanish* and *English* Horses are much better Bodied, and have larger Legs than the *Barbs*. All the Colts of our Breed, are come of a *Barbary* Stallion. We always chose

*Barbs* for our Stallions, because they are always Mettled, and have good Wind and Heels; and 'tis commonly said, *Barbs* may die, but they never grow old: The contrary of which is observ'd in your *Friezland* large *Dutch* Horses (*Roussins*) for they grow soon old, and are long a dying, so that they prove troublesome to their Masters. The Duke of *Newcastle* has well observ'd, that the Vigor and Mettle of *Barbs* never ceases but with their Life.

**BARBLES** are Knots of Superfluous Flesh that grow up in the Channels of a Horse's Mouth; that is, in the Interval that separates the Barrs, and lies under the Tongue.

**BARDELLE**, is a Saddle made in the Form of a Great Saddle, but only of Cloath stuff'd with Straw, and tied tight down with Packthread, without either Leather, Wood, or Iron: They are not us'd in *France*, but in *Italy* they trot their Colts with such Saddles, and those who ride them are call'd *Cavalcadours*, or *Scozone*.

**BARNACLES**; the Word commonly us'd for what the *French* call *Mouraille*, which see.

To **BAR** a Vein, or Strike it, is an Operation perform'd by the Farrier upon the Veins of a Horse's Legs, and the other Parts of his Body, with intent

intent to stop the Course, and lessen the Quantity of the Malignant Humours that prevail there. Your Horses have got Traverse-Mules or Kib'd-Heels, and Rat-Tails or Arrests in the Hinder-Legs, you must Barr a Vein. In order to Barr a Vein, the Farrier opens the Skin above it, and after disengaging it, and tying it both above and below, he strikes between the Two Ligatures.

**B A R S** of a Horse's Mouth are the Ridge, or the highest Parts of that Place of the Gum that never bears any Teeth, and is situated between the Grinders and the Tusshes on each side of the Mouth: So that that part of the Gum which lies under, and at the side of the Barrs, retains the Name of Gum. The Barrs are that part of the Mouth upon which the Bitt should rest, or have its *Appui*; for though only a single Cannon bears upon the Tongue, the Barrs are so tender and sensible, that they feel the Effect of it even through the Thickness of the Tongue. Since your Horse's Barrs are so very sensible, he has a Fine Light Mouth; and in a whole Days Riding, you have him all along upon the Hand, with an Even, Firm and Light *Appui*, or Rest. This Horse has Round Hard Barrs, that are not very sensible, you must

make him a Bitt that will Rouze him, and make him Feel it, such as a Bitt that pulls all along; that is, one that does not bend, to give room to the Tongue in the Middle. These are desperate Bars, which have been so broke and cicatris'd, that now they are insensible. Your Horse seems to have a very Fine Tender Mouth, for his Barrs are Sharp and Edged like those of a *Barbary*-Horse. Your Horse's Lip guards, that is, covers the Barr.

A Horse is said to fall foul of the Barr, (in *French*, *Embarrer*) when in the Stables he entangles his Legs upon the Partition-Barr that's put to separate two Horses, and keep 'em from falling upon one another. Your *Barbs*, and your Vigorous Ticklish Horses are apt to fall foul of the Barr, and when they do, they struggle, and sling, and wound themselves in the Hocks, the Thighs, and the Legs, and are in danger of laming themselves, unless you speedily cut the Cord that keeps up one End of the Barr, and so suffer that End to fall to the Ground.

**B A Y** Colour. A *Bay*-Horse is what we commonly call Red inclining to Chestnut. This Colour varies several ways; 'tis a Dark-Bay, or a Light-Bay, according as 'tis more or less deep: And we have likewise *Dappled-Bays*. See *Mirou-*



*ette*. All Bay-Horses have black Manes, which distinguishes them from the Sorrel that have red or white Manes.

**B E A N** or Lampas. See *Lampas*.

*Bean*, or Eye of a Bean. See *Eye*.

**B E A R D**, or *Under-beard*, or *Chuck* of a Horse; is that part underneath the lower Mandible on the out-side, and above the Chin, which bears the Curb of the Bridle, See *Curb* and *Genette*.

**B E A T** upon the hand. See *Chack*.

*Beat*; to beat the Dust or the Powder, is said of a Horse that at each Time or Motion does not take in Ground or Way enough with his Fore-legs. A Horse beats the Dust at *terra a terra*, when he do's not imbrace or take in Ground enough with his Shoulders, and makes all his Times or Motions too short, as if he made 'em in one place. He beats the dust at Curvets, when he do's 'em too precipitantly, and too low. He beats upon a Walk, when he walks too short, and makes but little way, whether in straight Lines, Rounds, or Passaging.

**B E L L Y**; a *Thick-belly'd*, a *Well-body'd*, a *Well-flank'd* Horse; that is, a Horse that has large, long, and well-made Ribs; or such as are neither too narrow nor too flat. This Horse has Belly enough, for his Flank shews that he feeds well.

Such a Horse has no Body, he's thin-flank'd; that is, his Ribs are too narrow, or short, and the Flank turns up: which makes his Body look flankless, like a Grey-hound. A Horse of this nature we commonly call in *French*, an *Estrac*; which generally speaking is a fine sort of tender Horses, not very fit for Travelling or Fatigue, unless they feed very heartily. We reject all Coach-Horses that are not well-bodied, all that are narrow or thin-gutted, and seem to have the Hide or Skin of their Flanks scritch'd upon their Ribs: But a Hunter is not the worse lik'd for being light-belly'd; nay on the contrary, he's prefer'd to a thicker flank'd Horse, provided he's well winded, of good Mettle, light, and a great Eater. Since this Runner has lost it's Belly, if you mean to give it a better Belly, and make it thicker gutted, you must turn it to grass. Instead of the word *Belly* or *Gut* we frequently use *Flank*. See *Handful*, *Estrac*, *Light-belly'd*, and *Flank*.

**B I D E T**. See *Nag*.

**B I T T**, or Horse-Bitt, (in *French*, *Mords*) in general signifies the whole Machine of all the iron Appurtenances of a Bridle; as the Bit-mouth, the Branches, the Curb, the Sevil-holes, the Tranchefil, and the Cross Chains: But oftentimes it signifies only the *Bit-mouth* in particular.

*Bit-mouth* (in *French*, *Embouchure*) is a piece of Iron forged several ways, in order to be put into a Horse's Mouth, and to keep it in subjection. Of these Bit-mouths, some are single Canon-mouths, some are Canon-mouths with an Up-let or mounting Liberty, some Scatch-Mouths, some Mouths after the Form of a Barge, some with two long turning Olives, and several other sorts; all with different Liberties for the Tongue, or without Liberty. But all Bit-mouths ought still to be proportion'd to the Mouth of the Horse, according as 'tis more or less cloven and wide, or more or less sensible and tender, according as the Tongue and the Lips are higher or flatter, and as the Palate is more or less fleshy: Observing withal that if the Horse be old, the Palate will always have but little Flesh upon it. Your Horse has a false Mouth; and tho' the Bit-mouth is well ordered, he do's not obey. See *Liberty*.

A *Bit-mouth*, all of a piece, without a Joint in the middle, is call'd by the *French* a Bit that presses *de l'entier*. See *Barrs*.

**B L A C K**; More, or Coal-black is the Colour of a Horse that's of a deep, shining, and lively Black.

**B L A Z E**. See *Star*, and *White-Face*.

**B L E Y N E** is an Inflammation occasion'd by Blood purrified in the inner part of the Coffin towards the Heel, between the Sole and the Coffin-Bone. My Horse is not lame now, for he's cur'd of his *Bleyne*. See *Hoof-cast*.

**B L O S S O M** or Peach-colour'd Horse, is one that has his Hair white, but intermix'd all over with Sorrel and Bay Hairs. Such Horses are so insensible, and hard both in the Mouth and the Flanks, that they are scarce valued; besides, that they are apt to turn blind.

To **B L O W** upon the Hair or Frush. See *Hair*, and *Bouillon*.

**B O A R**; A Horse is said to boar, when he shoots out his Nose as high as his Ears, and tosses his Nose in the wind. See *Wind*.

**B O D Y**; A Horse well-body'd; *i. e.* thick-flank'd, high-belly'd. See *Belly*, and *Light-belly'd*.

**B O L S T E R S** of a Saddle, are those parts of a great Saddle which are rais'd upon the Bows, both before and behind, to hold the Rider's Thigh, and keep him in a Posture of withstanding the Disorders that the Horse may occasion. Commonly Saddles have no Hind-Bolsters. We use the Expression of sitting a Bolster, (in *French*, *Chausser une Batte*) when we



we put the Cork of the Saddle into the Bolster, to keep it tight. That Part of the Saddle being formerly made of Cork, took first that name, tho' now 'tis made of Wood.

**BOUILLON** is a Lump or Excrecency of Flesh that grows either upon or just by the Frush, insomuch that the Frush shoots out like a Lump of Flesh, and makes the Horse halt; and this we call the Flesh blowing upon the Frush. Your Manage Horses, which never wet their foot, are subject to these Excrecencies, which make 'em very lame.

**BOULETE**; A Horse is call'd *Boulete*, when the Fetlock or Pastern-joynt (in *French*, *Boulet*) bends forward, and out of its natural Situation; whether thro' violent Riding, or by reason of being too short-jointed, in which case the least Fatigue will bring it.

**BOWS** of a Saddle, are two Pieces of Wood laid Archwise, to receive the upper part of a Horse's Back, to give the Saddle its due Form, and to keep it tight. The Fore-bow which sustains the Pommel, is compos'd of the Withers, the Breasts, the Points or Toes, and the Corking. The Withers is the Arch that rises two or three fingers over the Horse's Withers. The Breasts are placed where the Arch or upper part of the Bow ends. The Points or Toes are the lower

part of the Bow: and the Corking is pieces of Wood, formerly pieces of Cork, upon which we fit and make fast the Bolsters. The Hind-bow bears the *Troussequin*, or quilted Roll. The Bows are cover'd with Sinews; that is, with Bulls Pizzles beaten, and so run all over the Bows to make 'em stronger. Then they strengthen 'em with Bands of Iron to keep 'em tight, and on the lower side of the Bows, nail on the Saddle-straps, with which they make fast the Girths.

**BOUT**; A Horse is said to be *A Bout*, when he is overdone and quite spent with Fatigue.

**BOUTE**; A Horse is called *Boute*, when his Legs are in a straight Line, from the Knee to the Coronet. Short-jointed Horses are apt to be *Boute*; and, on the other hand, long-jointed Horses are not.

**BRANCHES** of the Bridle, are Two Pieces of Iron bended, which in the interval between one and the other bear the Bitt-Mouth, the Cross-Chains, and the Curb; so that on one end they answer to the Head-stall, and on the other to the Reins, in order to keep the Horse's Head in subjection. A Hardy, Bold or Strong Branch, is one that brings in the Head. A Weak Branch is a Branch that was formerly us'd for raising the Head, but now is disus'd, especially

especially since the discovery of the Error of those who fancy'd that it rais'd after the same manner with the Kned-Branches. Mr. *Solleysel* has publish'd an excellent Treatise of Bitts and Branches. See *Banquet* and *Shoulder*.

**B R A S S I C O U R T**, or *Brassicourt*, is a Horse whose Fore-Legs are naturally bended Arch-wise; being so call'd by way of distinction from an Arch'd-Horse, whose Legs are bow'd by Hard Labour.

**B R A Y E**, an obsolete *French* Word, made use of by some to signify the Entry of a Horse's Throat, or the Extremity of the Channel towards the Lower Maxillary Bones.

**B R E A K**. To break a Horse in Trotting, is to make him Light upon the Hand by Trotting, in order to make him fit for a Gallop. To break a Horse for Hunting, is to Supple him, and make him take the Habit of Running. 'Tis a Furious Fatigue to run Horses at full speed before they are Broke. When this Horse is Broke, he'll run well. This Thick well-knit Horse is strong indeed, but 'twill be a long time before he's Broke.

**B R E A S T S**, part of the Bow of a Saddle. See *Bows*.

**B R E A S T** of a Horse. See *Counter*.

**B R E A S T - P L A T E**, or Tee, is the Strap of Leather that runs from one side of the Saddle to

the other, over the Horse's Breast, in order to keep the Saddle tight, and hinder it to slide backwards when the Horse goes upon a Rising-Ground.

**B R E A T H**, or Wind. This Word signifies sometimes the easie Respiration of a Horse; and sometimes it implies the Ease and Rest, or Repose of a Horse. As, Give your Horse Breath, do not ride him down. Give that Leaping Horse a long Breathing time between the Turns or Repetitions of his Manage. This Horse is well Winded. Your Hunters should be Long-winded. This *Barb* has always held his Wind equally upon his Manage. This Horse is Master of his Wind, or Breath. This last Expression is applied to Horses that snort, and your Jockeys take Snorting for a sign of a Long-winded Horse. See *Snort*.

*A Thick-winded Horse* (in *French*, *Cheval gros d' haleine*) is a Horse that without being Purfive, wants Breath, and wheezes very much upon a Trot or a Gallop. This Horse is Thick-winded, by reason that the Respiration Passages are too narrow.

**B R E E D**, (in *French* *Haras*) is the Place where Mares for Breed, and Stallions are kept in order to raise a Stud. To keep a Breed, to govern and manage a Breed. All the Mares in this Breed have taken;



taken ; *i. e.* they are with Foal. To make a Good Breed , you can't choose a better Stallion than a *Spanish* Horse ; nor better Stud-Mares than your *Naples* Mares. Out of this Breed I have had two *Barbary* Escape's.

**BRIDLE** of a Horse is a Contrivance made of Straps or Thongs of Leather, and Pieces of Iron, in order to keep a Horse's Head in subjection and obedience.

Instead of saying, Pull the Bridle, we say, Bear your Hand : And for Slacking the Bridle ; we say, Slack your Hand : Lower your Hand : Yield with your Hand.

To cleave to, or hold by the *Bridle*, implies the Fault of an Ill Horseman, who instead of slacking his Hand, when a Horse is disorderly, clings to it, as if 'twere to the Mane. Such a Horse-man does not fit firm by no means ; he wants the Habit, or else the Force of clinging close with his Thighs : When the Horse flies out, and is disorderly, he holds by the Bridle as if 'twere the Pommel of the Saddle. See *Light-hand* and *Pontlevis*.

*Touch*, or *Check* of the *Bridle*. See *Ebrillade* and *Saccade*.

To *Swallow the Bridle* (in *French*, *Boire la Bride*, or to Drink the Bridle) is said of a Horse that has too wide a Mouth, and too small a Bitt-Mouth ; insomuch that the Bitt

rises too high, and Gathers or Furles the Lips, and misplaces it self above that place of the Barrs where the Pressure should be ; and by this means the Curb is likewise displac'd, and shov'd too high.

*Bridle-hand*, is the Horse-man's Left-hand ; the Right-hand is call'd the Spear or Sword-hand.

**BRIDON**. See *Snaffle*.

**BRILLANT** : A Brisk High Mettled Stately Horse is called *Brillant*, as having a Rais'd Neck, a Fine Motion, Excellent Haunches upon which he rises, tho' never so little put on. Such a Horse Champs upon his Bridle with a Good Grace. I saw but now in the King's Quarry one of the most *Brillant* and best manag'd Horses that can be. I have just bought a Horse that knows nothing, but he's *Brillant* and if right taken, will succeed in the Manage.

**BRING** in a Horse, is to keep down the Nose of a Horse that Bores and Tosses his Nose up to the Wind ; this we do with a good strong Branch. See *Banquet* and *Wind*.

**BROUILLE**R : A *French* Word us'd in the Academies, importing that a Horse, when put to any Manage, Plunges, Traverses, and appears in Disorder. This Gentleman is not Master of his Legs, he makes his Horse *Brouiller* ; *i. e.* he makes him Traverse and Cast down



down his Head, the Spur being too hard for him. Sit very close upon that *Barb*, for he has his Aids so fine; that if you cling with your Thighs never so little beyond the Due, and alter your Legs, you'll make him *Brouiller*, and hinder him to work in the Due Manage. See *Thighs*.

**BUTTERIS** is an Instrument of Steel fitted to a Wooden-Handle, with which they pare the Foot, or cut the Hoof of a Horse.

**BUTTON** of the Reins of a Bridle, is a Ring of Leather with the Reins pass'd through it, which runs all along the length of the Reins. To put a Horse under the Button, is done when a Horse is stop'd without a Rider upon his Back, the Reins being laid upon his Neck, and the Button lower'd so far down, that the Reins bring in the Horse's Head, and fix it to the true Posture or Carriage. 'Tis not only the Horses which are manag'd in the Hand that must be put under the Button, for the same Method must be taken with such Horses as are bred between two Pillars, before they are back'd.

## C.

**CADENCE**, is an equal Measure or Proportion observ'd by a Horse in all his

Motions, when he's thoroughly manag'd, and works justly at Gallop, *terra a terra*, and the Airs; so that his Times or Motions have an Equal Regard to one another, that one does not imbrace or take in more Ground than the other, and that the Horse observes his Ground regularly. This Horse works always upon the same *Cadence*; he follows the *Cadence*; he does not change his *Cadence*, he remains equally between the two Heels. He is fine and gentle in all his Aids, and when put to the Manage, he never interrupts his *Cadence*. This Horse has so Fine a Mouth, and works with so much liberty in the Shoulders and Haunches, that he keeps his *Cadence* with great Facility: Nay, he takes a very good *Cadence* upon his Airs, without stepping false, without jumbling, and works equally to both Hands. See *Counter-time* and *Time*.

**CALADE**, or *Basse*, is the Descent, or Sloping Declivity of a Rising Manage Ground, being a small Eminence upon which we ride down a Horse several times, putting him to a short Gallop, with his Forehams in the Air, to make him learn to ply or bend his Haunches, and form his Stop upon the Aids of the Calves of the Legs, the Stay of the Bridle, and the Cavesson, seasonably given; for without these

these Aids, he would throw himself too much upon his Shoulders, and not bend his Haunches. Work your Horse in a *Calade* after the *Italian* way; ride him straight, and then you make good use of the *Calade*. These *Calades* will discourage your Horse, and perhaps ruin his Hams, for you have pitch'd upon too steep a Declivity; and besides, you do not make the Aids of the Bridle accord with those of the Calves of the Legs.

**CANON-MOUTH** of a Bitt, is a round but long piece of Iron, consisting sometimes of two pieces that couple and bend in the middle; and sometimes only of one piece, that does not bend, as in the *Canon-Mouth à Trompe*. *Canon-Mouths* of all sorts are contriv'd to keep the Horse in subjection; and are so contriv'd that they rise gradually towards the middle, and ascend towards the Palate; to the end that the void Space left underneath may give some liberty to the Tongue.

**CAPARASSON** or Horse-cloth, is a sort of Cover for a Horse. For led Horses 'tis commonly made of Linnen Cloth, border'd round with Woollen, and enrich'd with the Arms of the Master upon the middle which covers the Croupe, and with two Cyphers on the two sides. The Caparassons for the Army are

sometimes a great Bear's-skin; and those for Stables are of single Buckram in Summer, and of Cloth in Winter.

**CAPRIOLES** or Leaps of *firma a firma*, are Leaps that a Horse makes in one and the same place, without advancing forwards, and that in such a manner, that when he's in the Air and at the height of his Leap, he yerks or strikes out with his Hinder-legs even and near. A Capriole is the most difficult of all the high Manage, or rais'd Airs. It differs from a Croupade in this, that in a Croupade the Horse do's not shew his Shoes; and from a Balotade in this, that in a Balotade he do's not yerk out. Your Horse will never work well at Caprioles, unless you put him between two Pillars, and teach him to raise first his Fore Quarters, and then his Hind Quarters, while his Fore are yet in the Air; for which end you must give the Aids of the Whip, and the *Poinson*. If you would teach your Horse to make Caprioles, and yerk out handsomely with his hinder Feet, stay and help him with your hand, and your heels. This Leaping Horse takes to Caprioles of himself, for he makes equal Leaps, and that upon the hand, *i. e.* without forcing the hand, and resting heavy upon the Bridle. See to *Yerk*.



**CARACOL** is an oblique Piste or Tread traced out in Semi-rounds, changing from one hand to another, without observing a regular ground. When Horse advance to charge in Battel, they sometimes ride up in *Caracols*, to perplex the Enemy, and make 'em doubtful whether they are about to take 'em in the Front, or in the Flank. *Caracol* is a *Spanish* word, and in that Language signifies the Motion that a Squadron of Horse makes, when upon an Engagement. the first Rank has no sooner fired their Pistols, than they divide and open into two Half-Ranks, the one wheeling to the right, and the other to the left, along the Wings of the Body to the Rear. Every Rank observes the same Order after firing; and the Turning or Wheeling from the front to the rear is call'd a *Caracol*.

To *Caracole*, is to go in the form of Half-rounds.

**CAREER**; this Word signifies both the Ground that's proper for the Manage, and the Course or Race of a Horse that do's not go beyond two Hundred Paces. This Barb makes a very good Career from pacing to stopping. This *English* Horse do's not furnish his Career; that is, he does not finish his Course with the same Swiftnes, and does not move so short and swift at the middle and end, as at the begin-

ning. This *Spanish* Horse is fit for the Ring; he has a short and swift Career, and holds it for a Hundred Paces.

**CARRY low**; (in *French* *Porter bas*;) A Horse is said to Carry Low that has naturally a soft ill-shap'd Neck, and lowers his Head too much. All Horses that arm themselves Carry Low; but a Horse may Carry Low without arming: For when he arms himself, his Neck is too supple, and he wants to evade the subjection of the Bridle; but when he Carries Low, he has his Neck ill-plac'd, and ill-made. Your Horse Carries Low, try whether a *French* Branch or a Gigot will raise him; for tho' they can rectify Nature, I doubt much if they can change it.

To Carry well, or in a becoming Posture, (in *French*, *Porter en beau lieu*) is said of a Horse whose Neck is rais'd or arch'd, and who holds his Head high, without constraint, firm and well-placed.

**CAST Hair or Hoof**. A Horse casts or sheds his Hair at least once a year. Every Spring he Casts his Winter-coat, and takes a Summer one; and sometimes in the end of Autumn he puts on his Winter-hair, in case he has been ill-curry'd, or ill-cloath'd, or kept in a cold Stable. Sometimes he Casts likewise his Hoof; and this happens frequently to your Coach-Horses that come from



*Holland*: For these being bred in a moist marshy Country, their Hoofs are too slabby, and of too weak a Consistence; so that coming into a dryer Country, where they're fed with less juicy Provender, they gradually cast their Hoof, by reason that their foot grows, and another firmer Hoof is form'd. Since your Horse casts his Hoofs, make the Farrier give 'em a good form in Shoeing him, or else his Feet will grow flat, and like an Oyster-shell.

**C A V A L C A D O U R** is a Word us'd at the Court of *France*, and the Families of the Blood; signifying the Query that's Master of the Horse. Thus we say, the Query Cavalcadour of the Queen's Stables; the Query Cavalcadour of Monsieur or the Duke of *Orleans's* Stables. In *Italy* this word signifies the Person who trots Colts with *Bardelle* Saddles. See *Bardelle*.

**C A V A L L E R I S S E** is an old *Italian* word, now dis-us'd in *France*, signifying a Person vers'd in the Art of governing and breaking Horses.

**C A V A L I E R**, in a war-like sense, signifies all Soldiers that are mounted on Horseback: But in the Manage it implies one that understands Horses, and is practis'd in the Art of Riding them.

**C A V E S S E** de More. See *More's-head*.

**C A V E S S O N**, is a sort of Nose-band, sometimes of Iron, sometimes of Leather or Wood, sometimes flat, and sometimes hollow or twisted, which is clapt upon a Horse's Nose to wring it, and so forward the suppling and breaking of the Horse. The *Cavesson* of Leather, and those of Wood, are made use of when we put Horses between two Pillars; and when we say a Horse takes the Ropes, we mean the Ropes or Straps of that sort of *Cavesson*. An Iron *Cavesson* saves and spares the Mouth of Young Horses when we break 'em; for by the help of it we accustom 'em to obey the Hand, and to bend the Neck and Shoulders, without hurting their Mouth, or spoiling their Barrs with the Bitt. Now, an Iron *Cavesson* is a Semicircle, or a Band of Iron bended to an Arch, consisting of two or three Pieces join'd by Hinges, and this we clap upon the Nose of a Young Horse. Some *Cavessons* of Iron are twisted or wreath'd, and some are flat, which bear equally upon the Nose, and are indeed the best. A *Cavesson*, à *Siguette*, or a Biting *Cavesson* is hollow in the middle, and notch'd like a Saw upon the two sides of its Concavity, in order to pinch the Nose of a Surly or Stiff-necked Horse. The *Cavesson* call'd *Camare* was arm'd with little Teeth, on very Sharp Points.



Points of Iron, which tore and abused a Horse; so that at present 'tis banish'd the Academies, and the very Name is scarce known among the Bitt-makers of *Paris*. The *Siguettes* is likewise in disgrace. All Iron *Carveffons* are mounted with a Head-stall, a Throat-band, and two Straps or Reins, with three Rings; one Rein we pass through the Middle Ring, when we mean to make a Horse work round a Pillar; or for want of a Pillar, round a Man that stands in the Center. Through the two side Rings, we pass the two Reins which the Rider holds in his Hand, or makes fast to his Saddle, in order to keep a Horse's Head in subjection, and to supple his Shoulders. See *Ropes*.

**CHACK**, or Beat, upon the Hand. A Horse is said to Chack or beat upon the Hand, when his Head is not steady; but he tosses up his Nose; and shakes it all of a sudden, to avoid the Subjection of the Bridle. You have a *Turkish* Horse that retains the Fault of that Country Horses; he Beats upon the Hand; and the best Bitts that are, nor the best Hand, can never fix his Head. This Horse Chacks upon the Hand like a *Croat* or *Croatian* Horse; which proceeds from this; that his Barrs are too sharp and ridged, or edged, so that he can't bear the pressure of a Bitt; though never so gentle. If your Horse

had not too sensible, or too tender a Mouth, he would not Beat upon the Hand: But in order to fix and secure his Head, you need only to put under his Nose-band a small flat Band of Iron, bended Archwise, which answers to a *Martingale*. This will hinder him to beat upon the Hand, but will not break him of the Habit; for as soon as the *Martingale* is taken off, he'll fall into the same Vice again. See *Wind*.

**CHAIN**; the Cross Chain of a Bridle. See *Tranche-file*.

**CHANFRIN**, is the Fore-part of a Horse's Head, extending from under the Ears; along the Interval between the Eye-brows; down to his Nose.

**CHANFRAIN-BLANC**. See *Star* or *Blaze*.

**CHANGE** a Horse; or Change Hand; is to turn or bear the Horse's Head from one Hand to the other; from the Right to the Left, or from the Left to the Right. You should never change your Horse without pushing him forward upon the Turn; and after the Turn, push him on straight, in order to a Stop. This Horse changes from the Right with an ugly Grace. See *Entier*; *Nails*, *Walk*, and a *Passade of Five times*.

**CHANGE** Hair or Hoof. See *Cast*.



**CHANNEL** of the Mouth of a Horse, is that Concavity in the middle of the Lower Jaw, appointed for a place to the Tongue; which being bounded on each side by the Barrs, terminates in the Grinders, or Maxillary-Teeth. The *Barbles* grow in this Channel.

**CHAPELET**, is a Couple of Stirrup-Leathers mounted each of 'em with a Stirrup, and joining at top in a sort of Leather-Buckle, call'd the Head of the *Chapelet*, by which they are made fast to the Pommel of the Saddle, after being adjusted to the Rider's Length and Bore: They are used both to avoid the trouble of taking up or letting down the Stirrups every time that the Gentleman mounts on a different Horse and Saddle, and to supply the want of the Academy Saddles, which have no Stirrups to 'em.

**CHAPERON** of a Bitt-mouth, is a Word only us'd for Scatch-Mouths, and all others that are not Canon-mouths; signifying the End of the Bitt that joins to the Branch just by the *Banquet*. In Scatch-mouths the *Chaperon* is Round, but in others 'tis Oval: And the same part that in Scatch and other Mouths is called *Chaperon*, is in Canon-Mouths called *Froncean*.

**CHARBON**, (*i.e.* Coal) is an obsolete *French* Word, signifying that little Black Spot or

Mark that remains after a Large Spot in the Cavity of the Corner-teeth of a Horse, about the Seventh or Eighth Year, when the Cavity fills, and the Tooth being smooth and equal; is said to be *ras'd*.

**CHARGE**, is a Preparation or an Ointment of the consistence of a Thick Decoction, applied to the Shoulder-Splaits, Inflammations and Sprains of Horses. The Parts affected are rubb'd and chafed with this Composition, after which you may cover 'em with Sinking-Paper, if you will. *Charges* are made two ways, *viz.* either with *Emmiellures*; *i.e.* a Mixture of Honey, Turpentine, Suet, and the other Drugs; or with a *Remolade*, which is a Mixture of the Lees of Wine with the Drugs of the *Emmiellure*. Your Farriers confound the Names of *Charge*, *Emmiellure* and *Remolade*, and indifferently use one for t'other.

**CHASTISEMENTS**, or Corrections, are the Severe and Rigorous Effects of the *Aids*; for when the *Aids* are given with Severity, they become Punishments.

**CHAUSSE TROP-HAUT**; a White-footed Horse is said to be such, when the White Marks run too high upon the Legs.

**CHEST** Founder'd. See *Foundered*.

**CHEVALER**; (a *French* Word;) a Horse is said to *Chevaler*,



*valer*, when in passing upon upon a Walk, or a Trot, his Far Fore-leg crosses or overlaps the other Fore-leg every second time or motion. See *to Passage*.

**CHINE**, or Spine of the Back; (in the *French Echine*, and among the *Ancient Italian Masters Esquine*) is the Backbone, or the Ridge of the Back of a Horse.

**CHINK**. See *Clift*.

**CLAMPONNIER**, or *Claponnier*; an obsolete Word, signifying a Long-jointed Horse; that is, one whose Pasterns are long, slender and over pliant. The Word is properly applicable only to Bulls or Cows, for *la Clapponniere* (in *French*) is in them what the Pastern is in a Horse.

**CLIFT**, *Chink*, *Crack* or *Chap*; (in *French Avalure*) is a Deficiency in the New, Soft and Rough Uneven Hoof, that grows in Horses Feet upon the *Hoofcast*.

**CLOSE** *Behind* (in *French, Crochu*; *i. e.* Crooked;) is a Horse whose Hoofs come too close together; commonly such Horses are good. The Country People in *France* call such a Horse *Jarretier*; but that Word is in disuse at Court.

To *Close*, (*Fermer*) a *Passade* justly, is when the Horse ends the *Passade* with a *Demivolt* in good order, well narrow'd and rounded, and terminates upon the same Line upon which

he parted; so that he's still in a condition to part from the Hand handsomely, at the very last time or Motion of his *Demivolt*. The *French* call this *Fermer*, or *Serrer la Demi-volte*.

**COFFIN** of a Horse is the whole Hoof of the Foot above the *Cronet*, including the *Coffin-bone*, the *Sole* and the *Frush*. For want of knowing how to cure such a *Bleyme*, your Horse is *Hoof-cast*, and his *Coffin* is fallen.

*Coffin-Bone* is a small Spongy Bone inclosed in the midst of the Hoof, and possessing the whole Form of the Foot. See *Tendon*.

**COLD**, or *Rheum*, is a Flux of Impure Humours, which are evacuated by a Horse's Nostrils, and occasion a Cough less or more, a loathing of Food, and a heaving or beating of the Flanks.

**COLT** implies both the *He* and *She* of a Mare's casting: They lose this Name when they are about four Years old, for then we begin to back 'em. They are not capable of any great Labour or Fatigue till the *Upper-tushes* have cut the Skin, which happens about four Years, or four and a half. You should not put this Colt in the *Manage*, he is not above three Years old; you'll weaken his Back, and quickly ride him down; stay till he's at least five Years old, and then he'll have



more Vigor and Memory. See *Amble*.

To **COMMENCE**, or initiate a Horse, is to put him to the First Lessons, in order to break him. To commence this Horse, you must work him round the Pillar. See *Rope*.

**CORD**. See *Rope*.

**CORK** of a Saddle. See *Bolster*.

**CORNERS**, or Angles of the Volte, are the Extremities of the Four Lines of the Volte, when you work in a Square. To make the Four Corners; to work upon the Four Corners. See *Four* and *Square*.

*Corner-Teeth* of a Horse, are the Four Teeth that are placed between the Middling Teeth and the Tushes, being two above, and two below, on each side of the Jaw, which shoot forth when the Horse is four Year and a half old.

**CORONET**, or *Cranet* of a Horse, is the lowest part of the Pastern, which runs round the Coffin, and is distinguish'd by the Hair which joins and covers the upper part of the Hoof. Look to your Horse's *Coronet*, he has given himself an Attaint. Your Horse has a Crepance, or Malt-worm in his *Coronet*.

**CURVETS** are Leaps of an indifferent height, which a Horse makes in raising first his two Fore-legs in the Air, and making the two hinder Feet follow with an equal Cadence;

so the Haunches go down together, after the Fore-feet have touch'd the Earth, in continual and regular Reprizes. A Horse that's put to the Air of Corvets, a Horse that makes Corvets, that works at Corvets, that takes to Corvets of himself. This Horse beats the Dust in his Corvets, for he plays 'em too fast, and too low. You have work'd this Horse in Corvets with so little care, that he has got a Jardon. Since that Horse has got the Spavin, he'll abate his Corvets from the greatest height, for it being a Dry-Spavin, 'twill make him lift his Legs. See to *Harp* or *Grapple*, to *Beat the Dust*, *Abate* and *Time*.

To make a *Cross* in Corvets. See *Cross*.

**COUCH'D**. A Horse couched upon his Volts. See *Volte Couched*.

**COUNTER** of a Horse, is that part of a Horse's Fore-hand which lies between the Shoulder, and under the Neck. I see an Anticor in your Horse's Counter, you'll be obliged to put *Ellebor-Roots* into it. See *Herber*.

*Counter-Time*, (in French, *Contre-temps*) is the defence or resistance of a Horse that interrupts his Cadence, and the Measure of his Manage: This is occasioned either by a bad Horse-man, or by the Malice of the Horse. This Leaping Horse has made two or three Counter-times,



times, and instead of raising his Fore-quarters, has continued to yerk behind. This Horse has broke the Justness of his Manage by his Counter-times, and the Rider has but sordily seconded the Aids of the Bridle with the Aids of the Heels.

*Counter-mark'd.* A Horse is said to be Counter-mark'd, when his Teeth are artificially made hollow by a Farrier's Graver; and a False Mark is made in the Hollow Place, in imitation of the Eye of a Bean; with intent to make people believe that the Horse is not above six years old, and so conceal his Age, which in effect is far beyond what the Mark would seem to intimate.

*Counterpoise,* or Ballance of the Body, is the liberty of the Action and Seat of a Horseman, acquired by practising in the Manage: So that in all the Motions made by the Horse, the Horse-man does not incline his Body more to one side than to the other, but continues in the middle of the Saddle, bearing equally on his Stirrups, in order to give the Horse the seasonable and proper Aids. This Gentleman keeps his Counterpoise so well, that he is always prepar'd against the Surprizes and Disorderly Motions of the Horse. See *Seat.*

**COURSE,** or Race. This Word, which is not received

in the Manage, signifies upon other occasions, a Gallop at full speed. This *Barb* is a good Courser, and well winded. This *English Racer* has won the Course.

**C R A C K,** or Cleft, is a Chop in the Pasterns or Fetlocks of a Horse, which throws out Red Stinking Water. See *Cleft.*

**C R A M P** is a Stiffness in the Leg of a Horse, who oftentimes when he's drawn out of the Stable, drags his Leg for fifty or sixty Paces, as if he had no Motion in his Hough; but after that the Cramp disappears.

**C R A T C H E S** is a Swelling on the Pastern, under the Fetlock, and sometimes under the Hoof; upon which Score 'tis distinguish'd into the Sinewy Cratches which affect the Sinew, and those upon the *Crownet*, call'd *Quarter-bones*. Since your Horse has a *Quarter-bone*, you must cut the Tendon.

**C R E A T** is an Usher to a Riding-Master, or a Gentleman bred in the Academy, with intent to make himself capable of teaching the Art of Riding the Great Horse.

**C R E P A N C E** is a Chap or Cratch in a Horse's Legs, given by the Spunges of the Shoes of one of the Hinder-feet crossing and striking against the other Hinder-foot. This Cratch degenerates into an Ulcer. B 4



**CREVICE**; *i. e.* Chop, Clift, or Chink.

**CROATS**, or *Cravats*, are Horses brought from *Croatia*, a Frontier of *Hungary*; which for the most part beat upon the Hand, and bear up to the Wind; that is, bear their Neck high, and thrust out their Nose, shaking their Head. The *Croats* are subject to be hollow or shell-tooth'd.

**CRONET**. See *Coronet*.

**CROSS**: To make a *Cross* in *Corvets*, to make a *Cross* in *Balotades*, is to make a sort of Leaps or Airs with one Breath forwards, backwards, and sideways; as in the Figure of a *Cross*. Some talk of making a *Cross* in *Caprioles*, but that can't be; for the Horses that should make *Caprioles* backwards, would appear resty, and such as we call *Ramingue*, which would not work according to the just exactness of the *Manage*: Not to mention that the most vigorous Horse that is, can't with one Breath mark the whole *Cross* in *Caprioles*.

**CROWN'D**: A Horse is said to be crown'd, when by a Fall, or any other Accident, he is so hurt or wounded in the Knee, that the Hair sheds and falls off, without growing again. This Horse is Crown'd, you'll find it a hard matter to put him off; for Crown'd Horses are not very saleable, because they

are suspected to be apt to fall upon their Knees.

**CROUPADES** are higher Leaps than those of *Corvets*, which keep the Fore and Hind-quarters of the Horse in an equal height, so that he trusses his Hind-legs under his Belly, without yerking or shewing his Shoes. *Croupades* differ from *Caprioles* and *Balotades* in this, that in *Croupades* the Horse does not yerk as he does in the other two Airs.

*High-Croupades* are *Croupades* rais'd above the ordinary height, I'm about to put this Horse to the Air of *Croupades*. This Horse presents right for *Croupades*. He works in *Croupades*; he makes *Croupades*. See *Yerk*.

**CROUPE** of a Horse is the Extremity of the Reins, above the Hips. In making the Volts, a Horse's Shoulders should be opposite to his *Croupe*. Those who us'd this Expression, mean'd, that a Horse walking sideways, and upon two *Pistes*, his Shoulders make one Tract while the *Croupe* makes another. But after all, this is not a just way of speaking; for at that rate the Shoulders are not opposite to the *Croupe* in a Straight Line, by reason that half the Shoulders marches before the *Croupe*, and the Horse bending his Neck a little, looks into the Volt. See *Head in*, and *Truss'd*.

To *Gain the Croupe*, is when one Horse-man makes a *Demi-tour*



tour upon another, in order to take him upon the *Croape*. If in a Combat you are hard put to it by your Enemy, make a Demi-Pyroet at the end of the Passade, and gain his *Croupe*.

*Without slipping the Croupe (Sans que la Croupe echape)*. This Expression is used for Volts and a Gallop, and signifies, without traversing, without letting the *Croupe* go out of the Volte or the Tread of the Gallop.

Your Horse has a *Tettar* in his *Croupe*. See *Tettar*.

CURB is a Chain of Iron made fast to the upper part of the Branches of the Bridle, in a Hole called the *Eye*, and running over the Beard of the Horse. Your Horse will never be right upon the Hand unless you give him a longer Curb, for the uneasiness of his Beard, occasion'd by this Curb, makes him toss his Nose up to the Wind, and chack and beat upon the Hand. Your *English* Watering Bitts have no Curbs; and the *Turkish* Bitts, call'd *Genettes*, have a Ring that serves in the room of a Curb. See *Genette*.

To give a Leap upon the Curb, is to shorten the Curb, by laying one of the Mails or S like Joints of the Chain over the rest.

Curb is a Hard and Callous Tumour, that runs along the inside of a Horse's Hoof; that is to say, on that part of the

Hoof that is opposite to the Leg of the same side.

CUT. See *Interfere*.

To Cut or Geld a Horse, is to render him impotent; after which he is called a Gelding (in French, *Hongre*) by way of distinction from a Stone-horse. Commonly your *Rouffins*, (i. e. your Strong Thick-bodied Dutch Horses) are *Stone-horses* and not *Geldings*. The best way to cure a Horse of Biting and Kicking is to Geld him.

To Cut the Round, or Cut the Volte, is to change the Hand when a Horse works upon Volts of one Tread; so that dividing the Volt in two, he turns and parts upon a Right Line to recommence another Volt. In this sort of Manage, the Riding-Masters are wont to cry, *Coupez, Coupez le Rond*; Cut, cut the Round.

## D.

DAPPLE-BLACK, is a Black-horse, that in his Black Skin or Hair has Spots or Marks, which are yet Blacker and more shining than the rest of the Skin. When Bay-Horses have Marks of a Dark-bay, we call 'em *Dappled-Bays*, or *Bays a Miroir*.

DECEIVE. A Horse is said to be deceived (*Trompe*) upon a *Demi-volt* of one or two Treads, when working (for instance)

instance) to the Right, and not having yet furnish'd above half the *Demi-volt*, he's press'd one time or motion forwards, with the Inner-Leg, and then is put to a *Reprise* upon the left, in the same *Cadence* with which he begun; and thus he regains the Place where the *Demi-volt* had been begun to the Right, and works to the Left. Thus you may deceive a Horse upon any Hand.

**DEVUIDER:** A Term in the Academies, applied to a Horse that in working upon *Volts*, makes his Shoulders go too fast for the *Croupe* to follow, so that instead of going upon two Treads, as he ought, he endeavours to go only upon one: Which comes from the resistance he makes in defending against the Heels; or from the fault of the Horse-man that's too hasty with his Hand. See *Hasten*.

**DISARM:** To Disarm the Lips of a Horse, is to keep 'em subject and out from above the Barrs, when they are so large as to cover the Barrs, and prevent the true Pressure or *Appui* of the Mouth, by bearing up the Bitt, and so hindring the Horse to feel the effects of it upon the Barrs. Give your Horse a Bitt with a *Canon Coupe*, or *Cut*, which will Disarm his Lips; or else put the *Olives* upon him, which will have the same Effect.

**DIS-ERGOT.** See *Ergot*.

To *Disgorge*, (in *French*, *De-gorger*) is to Discuss or Disperse an Inflammation or Swelling: Your Horse's Legs are Gorged or Swelled, you must walk him out to Disgorge 'em.

**DISUNITE:** A Horse is said to Disunite, that drags his Haunches, that gallops false, or upon an ill Foot. See *Gallop false*.

**DOCK,** (or *Troussiqueue*) is a large Case of Leather as long as the *Dock* of a Horse's Tail, which serves for a Cover to the Tails of Leaping Horses, and is made fast by Straps to the Crupper, and has Leathern Thongs that pass between his Thighs, and along the Flanks to the Saddle Straps, in order to keep the Tail tight, and to hinder it to whisk about, or make the Horse appear broader at the *Croupe*.

**DOUBLE:** To Double the Reins: A Horse Doubles his Reins when he leaps several times together to throw his Rider. This *Ramingue* doubles his Reins, and makes *Pontlevis's*. See *Pontlevis*.

**DRENCH;** (in *French*, *Armand*) is a sort of Decoction prepared for a Sick Horse, and composed of several Drugs, mentioned in Mr. *Solleyset's Compleat Horse-man*. They put the Drench or *Armand* upon the end of a Bull's Pizzle, and thrust



thrust it down his Throat, in order to recover his Appetite and Strength.

**DRY**; To put a Horse to Dry-Meat, is to feed him with Corn and Hay, after taking him from the Grass, or housing him.

**DULL**; The Marks of a Dull Stupid Horse (in *French*, *Marques de ladre*) are White Spots round the Eye, and on the Tip of the Nose, upon any general Colour whatsoever: These Marks are hard to be distinguished in a White-horse: Though the Vulgar take these Spots for Signs of Stupidity, 'tis certain they are a great sign of the Goodness of a Horse; and the Horses that have them, are very sensible and quick upon the Spur.

**DUST**: To beat the Dust. See *Beat*.

## E.

**E A R**; *Wide-ear'd*; (in *French* *Oreillard*): A Horse is said to be such, if the Root or lower part of the Ear is placed too low, and the Ear it self is too large. Take care of these Two *Wide-Ear'd* Nags, their Ears are ill placed, and flap too far down; do but observe that with their Great-Broad Ears, they mark all the Times or Points of a Walk or Trot, as if they were Hogs.

**EBRILLADE**, is a Check of the Bridle, which the Horse-man gives to the Horse by a Jerk of one Rein, when he refuses to turn. An *Ebrillade* differs from a *Saccade* in this, that a *Saccade* is a Jerk made with both Reins at once. Most People confound these two Words, under the general Name of a Check, or Jerk of the Bridle; (in *French*, *un Coup de Bride*): But let that be as it will, 'tis always a Chastisement, and no Aid, and the Use of it is banished the Academies.

**ECAVESSADE**, is a Jerk of the Cavesson.

**ECHAPER**; *Laisser Echaper de la Main*: To suffer a Horse to escape, or slip from the hand; A Gallicism us'd in the Academies, implying, to give him head, or put on at full speed. When you give your Horse head, guide him straight. See *Nails*.

**ECHAPE**; An *Echape* (so call'd in *French*) is a Horse got between a Stallion and a Mare, of a different Breed, and different Countries. In this Breed I have had two *Barbary Echapes*, and two of *Spanish* Horses.

**ECOUTE**: A Pace or Motion of a Horse is said to be *Ecouté*, or Listening, when a Horse rides well upon the hand and the heels, compactly put upon his Haunches; and  
hears

hears or listens to the Heels or Spurs, and continues duly balanced between the Heels, without throwing to either side. This happens, when a Horse has a fine Sense of the Aids of the Hand and Heel.

**ECURIE** is a Covert-place for the Lodging or Housing of Horses. Our Horses are but ill stabled in this *Ecurie*. The *French* use the word (*Etabler*) to *stable*, as a Verb. But in the room of the Noun they imploy *Ecurie*. This Horse's Hair stares, and is planted upright, because he has been too coldly stabled in this *Ecurie*.

**ECUYER**; A *French* word (in *English*, *Querry*) has different Significations in *France*. In the Academy, or Manage, the Riding-Master goes by the name of *Ecuyer*. In the King of *France's* Household there are *Querries*, or *Ecuyers de quartier*, who help the King in Mounting his Horse, and Alighting; and follow his Majesty upon Horse-back, and carry his Sword. The Queen's Gentlemen Ushers, and the Masters of the Horse to Princes and Persons of Quality, are called *Ecuyers*. Besides all which, there are the *Ecuyers Cavalcadours*; for which see *Cavalcadour*.

**EFFECTS** of the Hand are taken for the Aids, *i. e.* the Motions of the Hand, that serve to conduct the Horse. There are four Effects of the

Hand, or four ways of making use of the Bridle; namely, to push a Horse forwards, or give him head; to hold him in; and to turn the hand either to the right or left. See *Nails*.

**EGUILLETTE**; *No-uer l' Eguillette*. See *Yerk*.

**EMBARRER**. See *Barr*.

**EMBRACE** *the Volt*. A Horse is said to Embrace a Volt, when in working upon Volts he makes a good way every time with his Fore-legs. Such a Horse has Embraced a good deal of Ground; for from the place where his Fore-feet stood, to where they now stand, he has Embraced or gone over almost a Foot and a half. If he does not Embrace a good deal of ground, he'll only beat the dust; that is, he'll put his Fore-feet just by the place from whence he lifted them. Thus the opposite Term to Embracing a Volt, is, *Beating the dust*. A Horse cannot take in too much ground, provided his Croupe does not throw out, that is, provided it does not go out of the Volt. See *Beat*.

**EMIELLURE**. See *Charge*.

**ENCRINE**; an old obsolete and improper Word, signifying a Horse wither-wrung, or spoil'd in the Withers.

**ENLARGE** a Horse, or make him go large, is to make him embrace more Ground than he



he cover'd. This is done, when a Horse works upon a round, or upon Volts, and approaches too near the Center, so that 'tis desir'd he should gain more ground, or take a greater Compass. To Enlarge your Horse, you should prick him with both Heels, or aid him with the Calves of your Legs, and bear your Hand outwards. Your Horse narrows, enlarge him, and prick him with the inner Heel, sustaining him with the outer Leg in order to press him forwards, and make his Shoulders go. Upon such occasions the Riding-Masters cry only, *Large, Large.* See *In.*

**ENSEMBLE**; *Bien ensemble.* See *Haunches.*

**ENTABLER**; A word us'd in the Academies, as applied to a Horse whose Croupe goes before his Shoulders in working upon Volts: For in regular Manage, one half of the Shoulders ought to go before the Croupe. Your Horse *Entables*; for in working to the right, he has inclination to throw himself upon the right Heel; and that fault you may prevent by taking hold of the right Rein, keeping your right Leg near, and removing your left Leg as far as the Horse's Shoulder. A Horse can't commit this fault without committing that call'd in the Academies *Aculer*; which see. But *Aculer* may be without *Entabler*. See *Aculer*, and *Embrace*.

**ENTIER**, the *French* Word for a Stone-Horse. *Entier* is a sort of Resty Horse that refuses to turn; and is so far from following or observing the Hand, that he resists it. Such a Horse is *Entier* on the right Hand; he puts himself upon his right Heel, and will not turn to the right. If your Horse is *Entier*, and refuses to turn to what hand you will, provided he flies or parts for the two Heels, you have a Remedy for him; for you have nothing to do but to put the *Newcastle* upon him, *i. e.* supple him with a Cavesson made after the Duke of *Newcastle's* way.

*Entier*; a Bit that presses *de l'entier*. See *Bit-mouth*.

**ENTORSES**. See *Pastern*.

**ENTRAVES**, and *Entravons*. See *Locks*.

**ENTREPAS** is a broken Pace or Going, and indeed properly a broken Amble, that is neither walk, nor trot, but has somewhat of an Amble. This is the Pace or Gate of such Horses as have no Reins or Back, and go upon their Shoulders, or of such as are spoil'd in their Limbs.

**EPAREER**; a Word us'd in the Manage, to signify the Flinging of a Horse, or his Yerking and striking out with his Hind-legs. See *Nouer l'Equillete*, and *Yerk*. In *Caprioles*, a Horse must yerk out behind with all his force; but in *Balot-*



Balottades he strikes but half out; and in Croupades he does not strike out his Hind-legs at all. All such Yerking-Horses are reckon'd rude Horses:

**ERGOT**, is a Stub like a piece of soft Horn about the bigness of a Chesnut, placed behind and below the Pastern-Joynt, and commonly hid under the Tuft of the Fetlock. To dis-ergot, or take it out, is to cleave it to the quick with an Incision-knife, in order to pull up a Bladder full of Water that lyes cover'd with the Ergot. This Operation is scarce practis'd at *Paris*; but in *Holland* 'tis frequently performed upon all four Legs, with intent to prevent Watery Sores, and other foul Ulcers.

**ESCLAME** is an obsolete *French* Word, signifying a light-belly'd Horse.

**ESQUIAVINE**, an old *French* Word, signifying a long and severe Chastisement of a Horse in the Manage.

**ESTRAPADE** is the Defence of a Horse that will not obey; who to get rid of his Rider, rises mightily before; and while his Fore-hand is yet in the Air, yerks furiously with his Hind-legs, striking higher than his Head was before; and during this Counter-time, goes back rather than advances.

**ESTRAC** is the *French* Word for a Horse that is light-body'd, lank-belly'd, thin-

flank'd, and narrow-chested. See *Belly*, *Light-belly'd*, *Flank*, *Jointee*, and *Green*.

**ESTRAPASSER**. See *Over-do*.

**EXTEND** a Horse: Some make use of this Expression, as importing, to make a Horse go large.

**EYE** of the Branch of a Bridle, is the uppermost part of the Branch, which is flat with a hole in it, for joining the Branch to the Head-stall, and for keeping the Curb fast.

*Eye*; a Horse unshod of one Eye. A rallying Expression, importing, that he's blind of an Eye.

*Eye* of a Bean is a black Speck or Mark in the Cavity of the Corner-Teeth, which is form'd there about the Age of Five and a half, and continues till Seven or Eight. And 'tis from thence that we usually say, such a Horse Marks still; and such a one has no Mark. See *Teeth*.

## F.

**FALCADE**. A Horse makes Falcades, when he throws himself upon his Haunches two or three times, as in very quick Corvets; which is done in forming a Stop, and Half-stop. A Falcade, therefore, is this Action of the Haunches, and of the Legs



Legs which bend very low, as in Corvets, when you make a Stop or a Half-stop. This Horse stops well, for he makes two or three Falcades, and finishes his Stop with a Pesate. This Horse has no Haunches; he'll make no Falcades. The Falcades of that Horse are so much the prettier, that in making them his Haunches are low. Stop your Horse upon the Haunches, in making him ply 'em well; so that after forming his Falcades, he may resume his Gallop without making a Pesate; that is, without stopping, or marking one Time: And thus he'll make a Half-stop. See *Stop, Half-stop, Haunches*, and *Time*.

**F A L S E.** This Horse is false. He Gallops false. See *Gallop false*.

**F A R C Y** is a Poyson or Corruption that infects the Blood of Horses, and appears in Swellings like Strings along the Veins, in Knots, and even in Ulcers. See *Fire*.

**F A R R I E R's Pouch**; A Leathern Bag, in which they carry Drivers, Nippers, Shoes for all Sizes of Feet, good sharp Nails, and all that is proper for new Shoeing a Horse that has lost his Shoe upon a Road. If you have no Farrier with you, you must always have in your Equipage a Farrier's Pouch well provided, and a Groom that knows how to drive Nails.

**F E A T H E R** upon a Horse, is a sort of natural Frizzling of the Hair, which in some places rises above the lying Hair, and there casts a Figure resembling the Tip of an Ear of Corn. There are Feathers in several places of a Horse's Body, and particularly between the Eyes. Many believe that when the Feather is lower than the Eyes, 'tis a Sign of a weak Eye-sight: But this Remark is not always certain.

*A Roman Feather*, (in French, *Epee Romaine*) is a Feather upon a Horse's Neck, being a Row of Hair turn'd back and rais'd, which forms a Mark like a Sword-blade just by the Mane.

**F E E L**; to Feel a Horse in the hand, is, to observe that the Will of the Horse is in their hand; that he tastes the Bridle, and has a good *Appui* in obeying the Bit.

To feel a Horse upon the Haunches, is to observe that he plies or bends them; which is contrary to leaning, or throwing upon the shoulders.

**F E R M E a ferme**; A Word peculiar to the Manage-Schools, signifying, in the same place, without stirring or parting. You must raise that Horse *ferme a ferme*. This Horse leaps upon *firma a firma*, and works well at Caprioles. When a young Gentleman comes first to the School, the rest, to play upon him, will ask him to Gallop upon *firma a firma*.



**FETLOCK**; (in *French*, *Fanon*) is a Tuft of Hair as big as the Hair of the Mane, that grows behind the Pastern Joint of many Horses: Horses of a Low Size have scarce any such Tuft. This Coach-horse has a large Fetlock; and the other has so much Hair upon his Legs, that if the Coach-man does not take care to keep them clean and tight, he'll be subject to the Watery Sores, call'd the Waters (*Les Eaux* in *French*.) There's an Ergot; (*i. e.* a Round Hard Stub) behind that Fetlock.

**FIG** is a sort of Wart on the Frush, and sometimes all over the Body of a Horse. The Figs that appear in the Frush or Sole, make an Evacuation of Malignant Stinking Humours, that are very hard to cure. For the Cure, see Mr. Solleysel's Book.

**FINGART**, an obsolete *French* Word, signifying a Horse that kicks against the Spurs.

**FIRE**: To give the Fire to a Horse, is to apply the Firing-Iron red hot to some Preternatural Swelling, in order to discuss it; which is oftentimes done by clapping the Firing-Iron upon the Skin, without piercing through. We give the Fire to Farcy-knots, by running a Pointed Burning-Iron into the Ulcers. We likewise give the Fire for Wrenches of the Pasterns.

**FIRING-IRON** is a Piece of Copper or Iron, about a Foot long, one end of which is made flat; and forged like a Knife, the Back of it being half an Inch thick, and the Fore-edge about five or six times thinner. When the Farrier has made his Firing-Iron red hot in his Forge; he applies the thinnest part to the Horse's Skin, and so gives the Fire to the Hams, or such places as stand in need of it. The Fire has been well given upon that Horse's Legs; in all appearance the Farrier had a Light-hand. See *Fire*.

**FINITEUR**, an old Word in the *Italian* Academies, signifying the end of the Career or Course.

**FLAME**, is a small Instrument of Fine Steel, compos'd of two or three moveable Lancets for bleeding a Horse; and sometimes for making Incisions upon occasion, and so supplying the room of an Incision-Knife.

**FLANK**: A Horse is said to have Little Flanks, to be forrily Bodied, to be gaunt belly'd, and thin Gutt'd, (in *French*, *Estrac*) when his flank turns up like a Greyhound, and his Ribs are flat, narrow, and short. A well Flank'd Horse, is one that has wide and well-made Ribs, and a good Body. In this case the Word Flank is used in the room of Gutt. See *Belly*, *Light-belly'd*, *Jointee* and *Green*.

FLESHY



**FLESHY Lump**, or Excrefcency. See *Bouillon*.

**FLING**, is the Fiery and Obftinate Action of an Unruly Horfe.

To *Fling* like a Cow, is to raife only one Leg, and give a Blow with it.

To *Fling*, or Kick with the Hind-legs. See *Yerk*.

**FLY the Heels**: A Horfe is faid to Fly the Heels, when he obeys the Spurs. See *Spur*, and *Heels*.

**FONCEAU**, is the Bottom or End of a Canon-Bitt-mouth; that is, the part of the Bitt that joyns it to the *Banquet*. See *Chaperon*.

**FOOT** of a Horfe is the Extremity of the Leg, from the *Cronet* to the lower part of the Hoof. The Four Feet are diftinguifh'd by four different Names: The two Fore-feet are by fome call'd the Hands of a Horfe; but that Term is in difufe, the common Expreflion being, the Far Fore-foot, to denote the Right-foot before; and the Near Fore-foot, the Stirrup-foot and the Bridle-hand-foot, to denote the Left-foot before.

Of the two Hinder-feet, the Right is call'd the Far-hind-foot; and when Spears were us'd, 'twas call'd the Spear-foot, becaufe in refting the Spear, the Socket of it answer'd the Right-foot. The Left-hind-foot is call'd the Near-foot behind.

*Foot Fat*: A Horfe is faid to have a *Fat Foot*, when the Hoof is fo thin and weak, that unlefs the Nails be drove very fhort, he runs the rifque of being prick'd in fhooing. The *Englifh* Horfes are very fubject to this Diforder. A Horfe's *Foot* is faid to be *Derobé* (in *French*) i. e. rob'd or ftolen, when 'tis worn and wafte'd by going without Shoes, fo that for want of Hoof, 'tis a hard matter to fhoe him. I would not buy this Horfe, becaufe his Feet were *Derobé*, &c.

A Horfe's Foot is faid to be worn or wafte'd (*ufe*) when he has but little Hoof, and not enough for fhooeing.

To gallop upon a good *Foot*, or put a Horfe upon a good *Foot* (in *French*, *Sur le bon pied*). See *Gallop false*.

**FOUNDERING** is an Universal Rheumatifm, or defluxion of Humours upon the Sinews of a Horfe's Legs, which caufes fo great a Stiffnefs in the Legs, that they lofe their wonted Motion. Your Horfe appears very tired, though he has not rid or work'd hard; his Legs are ftiff, he can't rife upon his Hinder-legs no more than if his Back were broke: Now all this fpeaks him foundered. If this Foundering does not make him Chest-founder'd, 'twill be the eafier cured; but if he is both Foundered and Chest-founder'd, and has the Molten-greafe,

as it happens sometimes, he will not get over it.

*Chest-foudering* is the agitation and heaving of a Horse's Flanks, with a Motion almost like that occasioned by a Fever. This may happen when a Horse is rid out of his Wind, and beyond his Strength, and is so overheated with the fatigue, that he can't breathe.

A *Foundered Horse* that has been over rid, and has not a free Respiration, is distinguished from a *Purfive Horse* in this, that the Lungs of a *Purfive Horse* are altered and much affected by the violent heaving of the Flanks. A Horse is *foundered* without over riding, when his Inward Parts, or his Blood are over heated and stuffed with Foreign Humours.

To *Founder*, or over ride a Horse, is riding him out of his Breath, and beyond his Strength.

**FOUR-CORNERS**; to work upon the *Four-Corners*, is to divide (in imagination) the Volt or Round into Four Quarters; so that upon each of these Quarters the Horse makes a Round or two at Trot or Gallop; and when he has done so upon each Quarter, he has made the *Four-Corners*.

**FROTH**, or *Foam*, is a Moist White Matter that ouzes from a Horse's Mouth. Your Horse champs upon his Bridle, and squeezes out of his Mouth

a White Ropy Foam; which argues that he is a Horse of Mettle, Health, and a Cool Fresh Mouth.

**FRUSH**, or *Frug* of a Horse, is a sort of Tender Horn which arises in the middle of the Sole, and at some distance from the Toe, divides into two Branches running towards the Heel, in the form of a Fork. Look after this Horse, for the Flesh is run in upon the *Frush*; I see an Excrecence or sprouting of Flesh in that part. There's a *Fig* in that Sorrel's *Frush*: And this Roan has a Scabbed *Frush*: And here is another that has a Fat *Frush*; i. e. a *Frush* that is too thick and too large.

**FUZEE** is two dangerous Splents, joining from above downwards. Commonly a *Fuzie* rises to the knee and lames the Horse. *Fuzies* differ from *Screws*, or through-Splents in this, that the latter are placed on the two opposite sides of the Leg.

G.

**GALLOP** is the Motion of a Horse that runs at full speed, in which making a kind of Leap forwards, he lifts both his Fore-legs almost at the same time, and when these are in the Air, and just upon the point of touching the Ground, he lifts both his Hind-Legs almost at once.



once. A Horse that has an easie light *Gallop*; a Horse that takes the *Gallop*, that puts himself to the *Gallop*. Such a Horse *gallops* fine; *i. e.* he *gallops* upon his Haunches, he does not press heavy upon the Bridle, he bends his Fore-legs well, he has a good Motion with him, he is well coupled, and keeps his Legs united. This Horse *gallops* like an *English* Horse, he grazes or glances upon the Ground, that is, he *gallops* close to the Ground, and does not raise his Legs as he ought to do. Such a Horse goes equally well at a Step, Trot, and Gallop. The Great *Gallop*, or the Hunting *Gallop*, or the *Gallop* with a Long Stretch. *Gallop* with all the Heels; *i. e.* at full speed. A short light *Gallop*; *i. e.* a Slow *Gallop*. This Horse that wheezes upon a *Gallop* is infirm; but the other that snorts, shews that he is Long-winded. This Horse *gallops* well upon two Treads. See *Snort*.

**GALOPADE.** The Fine *Galopade*, the Short *Gallop*, the Listening *Gallop*, the *Gallop* of the School: 'Tis a *Hand-gallop*, or *Gallop* upon the Hand, in which a Horse galloping upon one or two Treads, is well united, and well *raccourci*, or knit together, well coupled, and well set under him. This Horse makes a *Galopade*, and works with one Haunch in; *i. e.* instead of going upon One Tread; whether right out, or

in a Circle, he has one Haunch kept in subjection, let the turn or change of the Hand be what it will; so that the inner Haunch which looks to the Center of the Ground, is more narrow'd, and comes nearer to that Center than the Shoulder does: And thus the Horse does not go altogether to that side, and his way of working is a little more than One Tread; and somewhat less than Two. The difference between working with one Haunch in, and galloping upon Volts, and managing upon *terra à terra*, is that in galloping upon Volts, and working *terra à terra*, the two Haunches are kept subject; and the two Haunches are in, that is, within the Volt; but in galloping a Haunch in, only one is kept subject.

*To Gallop united*, to Gallop upon the good or right foot, is, when a Horse that gallops right out; having cut the way; or led with either of his Fore-legs, continues to lift that same Leg always first; so that the hinder Leg of a side with the leading Fore-leg, must likewise be rais'd sooner than the other Hind-leg. For instance; if the right Fore-leg leads before the left, then the right Hind-leg must likewise move sooner than the left Hind-leg; and in this Order must the Horse continue to go on.

*To Gallop false*, to dis-unite, to drag the Haunches, to change feet;



feet; to go or run upon false feet, to gallop upon the false foot; is, when the Galloper, having led with one of the Fore-legs, whether right or left, do's not continue to make that Leg always set out first, nor to make the Hind-leg of a side with the leading Leg to move before its opposite Hind-leg; that is to say, the orderly Going is interrupted. A Horse that gallops false, gallops with an unbecoming Air, and incommodes his Rider. My Horse did gallop false, but I have now taught him the right Foot. If your Horse gallops false, or dis-unites, and if you have a mind to put him upon keeping the right foot, and uniting well his Haunches; you must bring to with the Calves of your Legs, and then with the Out-spur, that is, the Spur that's contrary and opposite to the side upon which he dis-unites; so that if he dis-unites to the right, you must prick him with the left Heel.

**GANACHES** (so called in *French*) are the two Bones, one on each side of the hinder part of the Head, opposite to the Neck or Onset of the Head, which form the Lower Jaw, and give it motion. 'Tis in this place that the *Glands* or *Kernels* of the *Strangles* and the *Glanders* are placed.

**G A S K O I N.** See *Thigh*.

**G A T E** (in *French*, *Train*) is the Going or Pace of a Horse. This Horse has a good Gate, but the other has a broken Gate. This Horse goes well, but t'other does not.

**G E L D I N G**, (in *French*, *Hongre*) is a Horse whose Testicles are cut out, so that he is not fit for a Stallion.

To **G E L D.** See *Cut*.

**G E N E T**, is a small-siz'd well-proportion'd *Spanish* Horse. Mr. *de la Broue* gives the Name of *Genet* to such *Italian* Horses as are well-made and proportion'd.

**G E N E T T E**, or *Turkish* Bit; is a Bit, the Curb of which is all of one piece, and made like a large Ring, and plac'd above the Liberty of the Tongue. When they bridle a Horse, they make his Chin pass thro' this Curb, which surrounds his Beard. This sort of Bits are at present much us'd at the Court of *France*.

*Genette*; to ride with the Legs *à la Genette*, i. e. in the *Genette* or *Spanish* Fashion, is to ride so short, that the Spurs bear upon the Horse's Flank. This would be reckon'd an Indecency in *France* and *England*; but among the *Spaniards* it passes for a piece of Gallantry and handsome Carriage, when they ride upon their *Genettes* in going to Court before the Ladies.



**GIGOT**, a Branch after the form of a Gigot or Leg, is a Branch, the lower part of which (call'd the *Gargouille*) is round.

**GLANDERS**, is a thick Slimy and Bloody Humour, proceeding from a Defect in the Lungs, and voided by the Nostrils. A Horse that has the true Glanders is gone, and good for nothing; and whoever buys such a Horse, (in *France*) can oblige the Seller to take him again, any time within Nine Days after Delivery. You must warrant this Horse clear of the Glanders, and Purfyness; and sound, hot or cold. See *Sound*.

**GOAD**. See *Valet*.

**GOING**, (in *French*, *Al-leure*) is the Pace or Gate of a Horse. This Barb has all his Goings, or Paces, very fine; contrary to what we commonly observe of Barbs; for they are apt to stumble upon a Bowling-Green, unless they be animated, bore up, and put on. This Horse has a cold Gate with him; that is, he does not bend his Knee as he ought to do; and he raises his Legs so little, that he grazes, or sweeps the Ground.

**GORGED**, *i. e.* swell'd. This Horse's Pastern-Joynt is gorged, and the other has his Legs gorged: You must walk him out to dis-gorge 'em, or take down the Swelling.

**GRAPES**; a Word sometimes us'd to signify the *Arrests*, or Mangy Tumors that happen in a Horse's Legs. See *Arrests*.

To **GRAPPLE** (in *French*, *Harper*.) A Horse is said to Grapple, either one, or both Legs; the Expression being peculiar to the Hinder-legs. He grapples both Legs, when he lifts 'em both at once; and raises 'em with precipitation, as if he were a Curvetting. He grapples one Leg, when he raises it precipitantly higher than the other without bending the Ham. Your Horse harps, or grapples, so that he must have the Stringhalt in his Hough.

**GRASS**; to put a Horse to Grass. To turn him out to Grass to recover him. To take a Horse from the Grass, and keep him at Dry Meat. See *Dry*, and *Green*.

**GREEN**; (*Vert*) to give a Horse Greens, is to put him to Grass. If in the Spring-time your Horse is over-rid, lean, and gaunt-belly'd, give him *Green* Barley. If he's young, and his Flank not altered, that may recover him.

**GROUND**. See *Terrain*.

**GROUPADES**, a Corruption of *Croupades*.

## H.

**H A I R.** In speaking of Horses, the *French* use the Word *Poil*, (*i. e. Hair*) to signify their Colour: And sometimes 'tis us'd to signify that part of the Flank that receives the Prick of the Spur. After you have prick'd the Horse, do not leave your Spur in his Hair. Remove your Spur from the Hair, and presently recover your Legs to their place, for you always have your Spurs in his *Poil*.

To Rub a Horse à *Poil*, is to rub him down with the Grain, observing the natural lying of the Hair, and not going against the Hair.

*Pale-Hair*, or *Poil-Lavé*, is those parts of the Skin that approach more to White than the rest, as being not of so high a Tinge.

*Staring Hair*, (*Poil Plante*, or *Planted Coat*) is said of a Horse whose Hair bristles up, or rises upright; which Disorder is owing to his being ill curry'd, not well covered, or too coldly housed.

**HALBERT** (in *French*, *Bec de Corbin*) is a small Piece of Iron, one Inch broad, and three or four Inches long, solder'd to the Toe of a Horse's Shoe, which jets out before to hinder a Lame Horse to rest or tread upon his Toe. These

*Halbert-Shoes* do of necessity constrain a Lame Horse, when he goes at a moderate Pace, to tread or rest on his Heel; which lengthens and draws out the back Sinew, that was before in some measure shrunk.

**HALTER** for a Horse, is a Head-stall of *Hungary Leather*, mounted with one, and sometimes two Straps, with a second Throat-band, if the Horse is apt to unhalter himself. If you put a *Halter* upon this Horse, tye it very short, for if he can but lie down, 'tis enough: Take care of his Head-stall or Collar. Such a Horse has the Tick, he ticks upon his *Halter*.

*Halter-cast*, is an Excoriation of the Pastern, occasioned by the *Halter* its being entangled about the Foot, upon the Horse's endeavouring to rub his Neck with his Hinder-foot.

*Unhalter*. A Horse is said to Unhalter himself, that turns off his *Halter*. Since your Horse is so apt to unhalter himself, you must get him a *Halter* with a Throat-band.

Strap or String of the *Halter*, (*longe*) is a Cord, or long Strap of Leather made fast to the *Head-stall*, and to the Manger, to tye the Horse. Do not bridle your Horse till you see if he is *Halter-cast*. See *Tick*.

**H A N D**, is the Measure of a Fist clinched, by which we compute the height of a Horse:

The



The *French* call it *Paume*, and had this Expression and Measure first imparted to them from *Liege*. A Horse for War should be 16 or 18 *Hands* high.

*Handfull*. Two *Handfulls* (in *French*, *une Jointee*) is as much Grain or Bran as the two *Hands* will hold when joined together. You have a Horse that's very Lank-belly'd, if you have a mind to make him well Bodied, put a *Jointee* of Wheat every Morning into his Manger.

*Hand*: *Spear-hand*, or *Sword-hand*, is the Horse-man's *Right-hand*.

*Bridle-hand* is the *Left-hand* of the Horse-man. There are several Expressions which relate to the *Bridle-hand*, because that *Hand* gives motion to the Bitt-mouth, and serves to guide the Horse much more than the other helps. A Horse-man ought to hold his *Bridle-hand* two or three Fingers above the Pommel of the Saddle. This Horse-man knows how to keep time between his *Hands* and his *Heels*. This Horse-man has no *Hand*; that is, he does not make use of the Bridle but unseasonably, and does not know to give the aids or helps of the *Hand* with due nicety.

To keep a Horse upon the *Hand*, is to feel him in the Stay upon the *Hand*, and to be always prepared to avoid any Surprisal or Disappointment from the Horse.

A Horse is said to be, or rest well upon the *Hand*, that never refuses, but always obeys and answers the Effects of the *Hand*, and knows the *Hand*. A Horse-man should make it his business to make the Horse know and obey the *Heels*. To make a Horse right upon the *Hand*, and free in the *Stay*, or *Rest*, he must be taught to know the *Hand* by degrees; and gentle Methods; the Horse-man must turn him, or change *Hands*, stop him, and manage with dexterity the *Appui* or *Pressure* of his Mouth, so as to make him suffer cheerfully and freely the effect of the Bitt-mouth, without resisting or resting heavy upon the *Hand*. This Horse has no Stay, he beats upon the *Hand*. The Short, or *Hand-gallop* teaches Horses to be right upon the *Hand*.

*A Light Hand*. A good Horse-man ought to have a *Light Hand*; that is, he ought only to feel the Horse upon his *Hand*, in order to resist him when he attempts to slip from it; and he ought, instead of cleaving to the Bridle, to lower it, as soon as he has made his resistance. If a Horse through an overbearing eagerness to go forward, presses too much upon the *Hand*, you ought to slack your *Hand* at certain times, and keep a hard *Hand* at other times, and so disappoint the Horse of pressing continually upon the Bitt. Now this facility or liberty in

the Horse-man, of slacking and stiffening the *Hand*, is what we call a Good *Hand*. Your Horse works well, but you stick too much to the Bridle; instead of holding thus by the Bridle, you ought to clap your Thighs close to the Horse, and keep a Light *Hand*, and then you'll manage with exactness. Do not you know, that to have a Light *Hand*, and to manage a Horse with a Swinging Bridle, is one of the greatest marks of a good Horse-man?

To slack or yield the *Hand*, is to slacken the Bridle.

To hold up, or sustain the *Hand*, is to pull the Bridle in.

To guide a Horse by the *Hand*, is to turn or change *Hands* upon one Tread.

Part from the *Hand*. See *Part*.

*Appui*, or Stay of the *Hand*. See *Appui*.

Beat upon the *Hand*. See *Beat*.

To be heavy upon the *Hand*. See *Heavy*.

To press upon the *Hand*. See *Press*.

To change the *Hand* or turn. See *Change*.

Effects of the *Hand*. See *Effects*.

Hasten the *Hand*. See *Haste*.

To feel a Horse upon the *Hand*. See *Feel*.

Full *Hand*, or Full Rest upon

the *Hand*. See *Appui* and *Mouth*.

To have Mares cover'd in the *Hand*. See *Stallion*.

A Horse is said to force the *Hand*, when he does not fear the Bridle, but runs away in spite of the Horse-man.

To make a Horse part from the *Hand*, or suffer him to slip from the *Hand*, is to put on at full speed. To make a Horse part right from the *Hand*, he should not put himself upon his Back or Reins, but bring down his Hips.

*All Hands*. A Horse that turns upon *All Hands*, upon a Walk, Trot or Gallop. A Horse that is not *entier* or resty for one *Hand*. See *Entier*.

To work a Horse upon the *Hand*, is to manage him by the effect of the Bridle, without interposing any other helps, excepting that of the Calves of the Legs, upon occasion.

To lead a Horse in your *Hand*, to walk him in your *Hand*, to trot him in your *Hand*; *i. e.* without mounting him. If you would discover whether a Horse is Lame, trot him in your *Hand* upon a Pav'd place.

*Fore-hand* and *Hindband* of a Horse, is an Expression distinguishing the Parts of a Horse, as divided into the fore and hinder Parts, by the situation of the Horse-man's *Hand*. The Parts of the *Fore-hand* are the Head, the Neck, and the Fore-quarters.



quarters. Those of the *Hind-hand* include all the other Parts of the Body. Tho' this Horse looks well in the *Fore-hand*, he's yet better made in the *Hind-hand*. Such a Horse is ill shap'd in the *Hind-hand*, he has a *Flagging Croupe*. See *Brillant* and *Movement* or *Motion*.

**HAQUENEE**, an obsolete *French* Word for an *Ambling* Horse.

To **HARP**. See *Grap-ple*.

**HARD** Horse, is one that is insensible of Whip or Spur. This Horse is so hard, he's good for nothing but a Cart.

**HART**, or *Stag-Evil*, is a sort of Rheum or Defluxion that falls upon the Jaws, and the other Parts of the *Fore-hand* of a Horse, which hinders him to eat. Sometimes this Distemper affects likewise the Parts of the *Hinder-quarters*.

**HASTE** or quicken your *Hand*, (*Hatez la Main, hatez, hatez*) is an Expression frequently used by the *Riding-Master*, when a Scholar works a Horse upon Volts, and the Master has a mind he should turn his hand quicker to the side on which the Horse works; so that if the Horse works to the right, he turns quicker with his Shoulders to the right. And the like is observ'd if he works to the left.

**HAUNCH**, or *Hip* of a Horse, is that part of the *hind-quarter* that extends from the

*Reins*, or *Back* to the *Hough* or *Ham*. The Art of riding the Great Horse has not a more necessary Lesson than that of putting a Horse upon his *Haunches*; which in other Terms is call'd coupling him well, or putting him well together, or compact; (in *French*, *bien ensemble*, and *sous lui*.) A Horse that can't bend and low'r. his *Hips*, throws himself too much upon his Shoulders, and lies heavy upon the Bridle. A Horse is said to be throughly managed (in *French*, *Achevee*) when he bears well upon the hand, knows the *Heels*, and sits well upon his *Hips*. This Horse has his *Haunches* in subjection, and *falques* very well, for in making his *Falquades*, he holds his *Haunches* very low, and bends admirably well. To make a Horse bend his *Hips*, you must frequently make him go backwards, and make use of the *Aids* of the *Hands*, and of the *Calves* of your *Legs*, in giving him good *Stops*; and if that does not succeed, try him upon a *Calade*, or *Sloping Ground*, after the *Italian* Fashion. Your Horse makes his *Hips* accompany his *Shoulders* so well, that he is perfectly right set, See *put upon the Haunches*, *Calade*, *Carri-sson*, *Falquade* and *Feel*.

To *Drag the Haunches*, is to change the *Leading Foot* in galloping. See *Gallop false*.

*Head in*, and *Hips in*. See *Head*.

To Gallop with the *Haunch* in. See *Galopade*.

**H E A D** of a Horse, imports the Action of his Neck, and the effect of the Bridle and the Wrist. This Horse plants his *Head* well, and obeys the hand. Such a Horse refuses to place his *Head*, he shoots out his Nose, and never rests right upon the hand; he stays too much, or too little upon the hand. Such a Horse appears in a good Posture, he carries his *Head* well.

To give a Horse *Head*. See *Partir* and *Echaper*.

*Head in, and likewise the Hips*. You must passage your Horse, *Head* and *Groupe in*; i. e. work him side-ways upon two Parallel Lines, at Step or Trot; so that when the Horse makes a Volt, his Shoulders mark a *Piste*, or tread, at the same time that his *Haunches* give the Tract of another, and the Horse plying or bending his Neck, turns his *Head* a little within the Volt, and so looks upon the Ground he is to go over.

**H E A R T S**: A Horse of Two *Hearts* (*de deux coeurs*) i. e. a Horse that works in the *Manage* with constraint and irresolution, and can't be brought to consent to it. Such Horses are much of a piece with your *Ramingues*, or Kickers against the Spurs.

**H E A V Y**: To rest heavy upon the hand, is said of a Horse who through the Softness of his

Neck, the Weakness of his Back, the Weight of his Fore-quarters, or through Weariness, throws himself upon the Bridle, but withal, without making any resistance, or any effort to force the Horse-man's hand. Your Horse has too great an *Appui* or Rest upon the Bridle, he's heavy upon the hand, trot him upon his *Haunches*, and sustain or bear up with the Bridle. By stopping him, and making him go back frequently, you may make him light upon the hand, and so correct that Fault if it comes only from Laziness and Stiffness; but if it proceeds from a Defect in the Back, or Limbs, there's no remedy for it. My Horse is heavy upon the hand, but that is not so great a Fault as if he press'd and resisted upon the hand. See *Press*.

**H E E L** of a Horse, is the lower hinder-part of the Foot, comprehended between the Quarters, and opposite to the Toe. Your Horse is hoof-bound, and to recover his *Heels* you ought to take out his Sole, and keep his *Heels* very wide; by which the *Heels* will be restor'd in a Month. This Horse has Narrow-heels, so give him Panton-shoes.

*Heel* of a Horse-man. This being the part that's arm'd with the Spur, the Word *Heel* is taken from the Spur it self. This Horse understands the *Heels* well; he knows the *Heels*;  
he



he obeys the *Heels*; he answers the *Heels*; he's very well upon the *Heels*: The meaning of all which, is, that the Horse obeys the Spurs; which, in effect, is flying from 'em. Put your *Heel* to your Horse; stay him; bring to; prick with the right; prick with the left; clap both to his Sides. This Horse knows the *Heels* in *Curvets*, in *Caprioles*. Make him fly from the Right-heel; make him fly from the Left: Such a Horse resists the Spurs: he's a *Ramingue*; i. e, a Kicker against the Spur. To ride a Horse upon the *Hand* and *Heels*, is to make him take the Aids of the *Hand* and the *Heel* with a tender sense.

To ride a Horse from one *Heel* to t'other, is to make him go side ways, sometimes to one *Heel*, and sometimes to another: For instance; having gone ten Paces in flying from the Right-heel, you make him without stopping go still side ways in flying the Left-heel; and so on alternately.

*Inner-heel* and *Outer-heel*. See *In*, and *Narrow*.

HERBER, a *French* Word us'd by the Farriers, importing the following Application. For some Diseases, such as those of the Head and the Anticor, they put into the middle of a Horse's *Counter*, a piece of *Hellebore-Root*, which makes it swell and suppurate.

HERBE, (*Grass*) a Word in the *French Academies*, signifying a Reward, or some good Stuff given to a Horse that has work'd well in the *Manage*.

HIP. See *Haunch*.

*Hipshot*; (in *French*, *Epointè*, and *Esbranchè*), A Horse is said to be such when he has wrung or sprain'd his *Haunches* or *Hips*, so as to relaxate the Ligaments that keep the Bone in its due place.

HOLD. A Mare holds. See *Retain*.

HOLLOW-TOOTH'D Horse. See *Shell-tooth'd*.

HOOF, or *Horn* of a Horse's Foot, is a sort of Nail, of a Finger's depth, that surrounds the Sole and the Coffin-bone. In shoeing a Horse, the Nails are driven into the *Hoof*, in such a manner, that the Shoe does not bear nor rest upon the Sole; for the Sole being tenderer than the *Hoof*, the Shoe would injure it, and lame the Horse. When the *Hoof* is worn, we say the Foot is worn. Let your Horse's *Hoof* grow. Cracks or Clifts are apt to happen in the *Hoof*. The Disorder call'd *Hoof-bound* happens in the *Hoof* of the Fore-feet. Your Horse has got a *Quitter-bone*. See *Drive*.

*Hoof-bound*: A Horse is said to be *Hoof-bound*, when he has a Pain in the Fore-feet, occasioned by the Dryness and Contraction

tion or Narrowness of the *Horn* of the Quarters, which straitens the Quarters of the *Heel*, and oftentimes makes the Horse lame. A *Hoof-bound* Horse has a Narrow-heel, the sides of which come too near to one another, insomuch that the *Fruish* is kept too tight, and has not its natural extent: Such Horses should be shooed with the *Panton-Shoes*. See *Panton* and *Heel*.

*Hoof-cast*. A Horse is said to *Cast his Hoof*, when a *New Horn* grows in the room of the *Coffin*, after its being fallen off by any Disease, such as *Quarter-bones*, or *Bleymes*. A Horse that has cast his *Hoof*, is good for nothing but the *Plough*, and such kind of Work. Since for want of Proper Remedies, you have suffer'd your Horse to cast his *Hoof*, tell me whether it proceeds from a *Bleyme* upon the *Cronet*, or from *Foundering*, or from a *Prick*.

**H O R N.** See *Hoof*.

*Horn*. To give a *Stroke* with the *Horn*, is to blood a Horse in the Roof of the Mouth, with the *Horn* of a Stag, or *Roe-buck*, the *Tip* or *End* of which is so sharp and pointed, as to produce the effect of a *Lancet*. We strike with the *Horn* in the middle of the *Fourth Notch* or *Ridge* of the *Upper-Jaw*. This Horse is over heated, you must strike him with the *Horn*. See *Ridge*.

**A H O R S E** is an Animal so generally known, that to define him, 'tis sufficient to say, he is the noblest and most useful of all Animals, and his Sensible Nature, Obedience, Swiftnes and Vigor are at once the Object and the Subject of the noblest and most necessary Exercise of the Body.

**H O U G H**, or *Ham* of a Horse, is the Joint of the hinder-quarter, which joins the *Thigh* to the *Leg*. Your *Manage* Horse's must be made to bend their *Houghs*. Your Horse has *Fat*, *Fleshy*, *Small*, and consequently defective *Houghs*; but my Horse's *Houghs* are large, broad, well drain'd, and not inflam'd. There's no Horse here, but what is troubled in the *Hough* with the *Houghbony*, *Spavin*, *Fardon*, *Wind-galls*, *Blood-spavin*, *Curbs* or *Selenders*. Look upon the *Houghs* of these two Horses, the one is closed behind, and the other grapples. See *Grapple*.

What is it, the *Cramp* that makes your Horse's *Hough* so stiff?

*Horse-Block*. See *Montoir*.

*Hough-bony*; a Swelling on the *Tip* or *Elbow* of the *Hough* in a Horse's hinder-quarters, about as big as half a *Tennis-Ball*.

**H O U S S E**, (*Saddle-Case*) is a Cover made commonly of *Leather*, and put upon a *Saddle* to save it.

**H O U Z I N G**,



**HOUZING**, is either *Boot-houzing*, or *Shooe-houzing*: The former is a piece of Stuff made fast to the hinder-part of the Saddle, which covers the *Croupe* of the Horse, either for Ornament, or to cover the Horse's Leanness, or to preserve the Rider's Cloths, and keep 'em from being daub'd with the Sweat of the Horse. The *Houzing* for such as ride with Shooes, is commonly a piece of Scarlet Cloath bordered with Gold-fringe, and put round the Saddle, so as to cover the *Croupe*, and descend to the lower part of the Belly, to save the Gentleman's Silk-Stockings, when he mounts in his Shooes.

## I.

**JARDES**, or *Jardons*, are callous and hard Swellings in the Hinder-legs of a Horse, seated on the out-side of the Hough, as the Spavin is on the in-side. *Jardons* lame a Horse, unless you give the Fire dexterously, and betimes,

**JARRETIER**, an obsolete *French* Word, signifying a Horse whose Houghs are too close together; which is now expressed in *French* by *Crochu*, i. e. *Crooked*, or *Hook'd*.

**I N**, *Inside*, *Within*: And *Out*, *Outside*, *Without*. The inner Heel, the outer Heel; the inner Leg, the outer Leg; the

*In-Rein*; the *Out-Rein*. This way of speaking relates to several things, according as the Horse works to the right or left upon the Volts; or as he works a-long by a Wall, a Hedge, or some such thing. Thus it serves to distinguish on what hand, or what side, the Horseman is to give the Aids to a Horse upon Manage. For a-long by a Wall, the outer Leg is the Leg of a side with the Wall; and the other Leg is the *In-leg*. And upon Volts, if a Horse works to the right, the right Heel is the inner Heel, the right Leg the inner Leg; so that by consequence the left Heel, and left Leg, must be the outside Heel and Leg. Now the downright contrary will happen, if the horse works to the left. Now a-days, the Riding-Masters, to be the easier understood, use the Terms *right* and *left*, as for instance: Assist the Horse with the right Heel, with the right Leg, with the right Rein; taking the Situation of the Heels and Legs with respect to the Volt. See *Enlarge*, *Gallop False*, and *Large*.

*In*; the Head *in*, the Haunches *in*. See *Head*.

*In*; to put a Horse *in*; i. e. to breed or dress him. By which Expression, we understand putting him right upon the Hand, and upon the Heels. This Sorrel is put in (*Mis dedans*,) that is, he is broke, dress'd, and managed.



aged. The D. of *Newcastle* put Horses perfectly well in, by the means of his *Carveffon*.

**INSTEP**, is that part of the Hinder-leg of a Horse, that corresponds to the Shank in the Fore-leg, extending from the Ham to the Pastern-Joynt.

**INTERFERE**; a Horse interferences, when the side of one of his Shoes strikes against, and hurts one of the Fetlocks.

**JOINTEE**. See *Handful*.

## K.

**KICKER** against the Spurs. See *Ramingue*.

**KNEE** of a Horse, is the Joint of the Fore-quarters that joins the Fore-Thigh to the Shank. Do not you see that your Horse has got the Malenders in the Bend of the Knee? And truly I am of the mind, that he has Selenders a coming in the Bend of the Hock or Ham. These two Horses have two scurvy Faults in their Knees; the one's Arched by fatigue; and the other is so naturally, or what we call *Brassicour*. Such a Horse has a very hard Knot, or Swelling upon his Knee. I will not buy this Peach Blossom-colour'd Horse, because his Knee is crown'd: For my part, I shall be the last Man that shall desire to be his Master.

## L.

**LADRE**. See *Dull*.

**LAME**; A Horse is said to be (*Boiteux de l'Oreille*) *Lame of an Ear*, when he halts upon a Walk or a Trot, and keeps time to his Halting with the Motions of his Head: For all lame Horses do not keep time after that rate. *Lame of the Bridle*, is likewise us'd, by way of Raillery, to signify the same thing.

**LAMPAS**, or Bean, is a Swelling in the Palate of a Horse, *i. e.* an Inflammation in the Roof of his Mouth, behind the Nippers of the upper Jaw. Pray order this *Lampas* in your Horse's Mouth to be burnt.

**LARGE**; A Horse is said to go large, or wide, when he gains or takes in more Ground in going wider of the Center of the Volt, and describing a greater Circumference. This Horse goes too large; he launches out upon too much Ground; he does not keep subject. You must conduct that Horse large, by bringing to your inner Heel; for he goes too narrow of himself. See *Enlarge*.

**LEAD**; A Horse going upon a straight Line always leads, or cuts the way (*entame le chemin*) with his right foot. The Duke of *Newcastle* was the



the first that ever made use of the Term; and indeed it is very expressive. See *Gallop united*, and *Gallop false*.

**LEAP**, An Air of a Step and a Leap. See *Step*.

*Leaping Horse*, *i.e.* One that works in the high Manage; A Horse that makes his Leaps in Order, and with Obedience, between two Pillars upon a strait Line, in Volts, Caprioles, Balotades, or Croupades. Use, which in most things has a sovereign Sway, excludes a Gallop, a *Terra a Terra*, and Corvets, from the number of Leaps; because the Horse does not rise so very high in these. Each Leap of a Leaping Horse ought to gain, or make not above a Foot and a half of Ground forward.

**LEEK-HEAD**, (*Poireau*). See *Wart*.

**LEG** of a Horse, is the Member that supports his Body, and performs the Motion when he goes. Of the Four Legs, the two before have several Parts, each of which has a peculiar Name: So that by the Name of Fore-leg, we commonly understand that part of the Fore-quarters that extends from the Hough to the Pastern-Joynt; and call it the *Shank*: The part that corresponds to that in the Hinder-quarters, we call the *Instep*. But in common Discourse we confound the Fore and the Hind-quarters; and, without any distin-

ction, say, the four Legs of a Horse. This Horse has not a Leg to go upon, that is, they are spoil'd: Which is commonly understood of the Fore-legs. Such a Horse's Leg slacks; that is, he stumbles. One of these Horses has arch'd Legs, and the others are gorged and swollen. This Sorrel has got Arrests, or Mangy Ulcers, in his Leg. Such a Horse wants the Fifth Leg; that is, he's tyr'd, and bearing upon the Bridle, lyes heavy upon the Horseman's hand.

The *French* call a Horse *Droit sur les jambes*, *i.e.* straight member'd, or straight upon his Legs, when the Fore-part of the Pastern falls perpendicularly upon the Cronet; and the Shank and the Pastern are in a straight Line. See *Straight*, and *Long-jointed*.

*Legs of the Horseman*: The Action of the Horseman's Legs, given seasonably and with judgment, is an Aid that consists in approaching more or less with the Calf of the Leg to the Flank of the Horse; and in bearing it more or less off, as there is occasion. This Aid, a Horseman ought to give very nicely, in order to animate a Horse: And it's so much the finer, that 'tis hidden and private: For in stretching the Ham, he makes the Horse dread the Spur; and this fear has as much effect as the Spur it self. Such a Horse knows,

knows, or is sensible of, the Horseman's Legs. He takes the Aids of the Legs; he answers the Legs; he obeys the Legs.

The *Inside Leg*; the *outside Leg*. See *Inside*, *Enlarge*, and *Gallop false*.

**LENGTH**; to passage a Horse upon his own Length, is to make him go round in two Treads, at a Walk or Trot, upon a Spot of Ground so narrow, that the Horse's Haunches being in the Center of the Volt, his own Length is much about the Semidiameter of the Volt; the Horse still working between the two Heels, without putting out his Croupe, or going at last faster or slower than at first.

**LESSON**, is a Word us'd for the Instruction both of the Horse, and the Scholar. This young Gentleman takes his Lesson upon all sorts of Horse. Content your self with this Lesson of Walk and Trot; and do not attempt the Lesson of a Gallop. The Horse obeys this Lesson.

**LIBERTY** of the Tongue; is a void Space left in the Middle of a Bit, to give place to the Tongue of a Horse, made by the Bit's Arching in the middle, and rising towards the Roof of the Mouth. The various Form of the Liberty gives Name to the Bit. Hence we say, a Scatch Mouth a *Pignatelle*, *i. e.* with the Liberty after *Pignatelli's*

**Fashion**: A Canon-Mouth with the Liberty like a Pigeon's Neck. In forging that Bit, don't make the Liberty too high, lest it hurt, or at least tickle the Palate, and make the Horse carry low.

**LIEU**, (Place) a *French* Word employed in the Academies, to signify the Situation and Posture of a Horse's Head. *Ce Cheval porte en beau Lieu*; *i. e.* this Horse carries well; he holds his Neck high.

**LIGHT** Horse, (*Leger*) is a swift nimble Runner. We likewise call a Horse light that's well made, tho' he's neither swift nor very active: For in this last Expression, we consider only the Shape and Make of a Horse, without regard to his Qualities.

*Light* upon the hand; A Horse is said to be such, that has a good Tractable Mouth, and does not rest too heavy upon the Bit. Your Horses that have a thin Forehand, that is, but small Shoulders, are commonly light upon the hand. This Horse is light before, and subject in the Hips. We call a Coach-Horse light, when he stirs nimbly, and dreads the Whip; or when he has a light Trot. All your light Coach-Horses are good: and a hard heavy Coach-Horse, that takes the Lashing easily, is good for nothing.

*Light Hand*. See *Hand*.

**LIGHTEN**;



**L I G H T E N**; To lighten a Horse, to make a Horse light in the Fore-hand, (in *French*, *Allegèrir*) is to make him freer and lighter in the Fore-hand, than behind. If you would make your Horse light, you ought to find him always dispos'd to a Gallop, when you put him to a Trot; and after Galloping some time, you should put him back to the Trot again. This Horse is so heavy in the Shoulders, and cleaves so to the Ground, that you'll find difficulty in making him light in the Fore-hand, even tho' you make use of the Duke of *Newcastle's* Cavesson. Your Horse throws himself too much upon his Shoulders; you must make him light in the Fore-hand, and put him upon his Haunches. See *Haunches*, *Motion*, *Break*, and *Terraingol*.

**L I G H T - B E L L Y ' D** Horse, is one that commonly has flat, narrow, and contracted Sides, which makes the Flank turn up like that of a Greyhound. Such a Horse has but little Flank; he's light-belly'd; he travels and feeds but little, because he has too much Mettle.

**L I N E** of a Volt. See *Square*, and *Volt*.

**Line** of the Banquet. See *Banquet*.

**L I P** of a Horse, is the Skin that covers the Sides of his Mouth, and furrounds his Jaws. A Horse is said to arm,

or guard himself with his Lips, when his Lips are so thick that they cover their Barrs, and keep off the pressure of the Curb.

**L I S T E N I N G**; A Horse goes a Listening Pace. See *E-coutè*.

**L O C K S**, (in *French*, *Entravons*) are pieces of Leather two fingers broad, turn'd round, and stuff'd on the inside, to prevent their hurting the Pastern of a Horse, round which they are clapp'd. An *Entrave* is compos'd of two *Entravons* joyn'd by an Iron Chain that's seven or eight Inches long. See *Amble*.

**L O N G - J O I N T E D** Horse, is one whose Pastern is slender and pliant. This Horse is too long-jointed; his Pastern is so easy and weak, that the Joynt scarce presses the Earth, and so 'tis not proper to fatigue him. I have a Horse, whose Forelegs go in a straight Line, from the Knees to the Cronets; but yours is long-jointed. There are some long-jointed Horses that are strong and sinewy, and do not bend the Pastern-Joynt more than they should do: And this sort of Horses work better in the Manage than the short-jointed. Long-jointed Horses are apt to have Wind-Galls. See *Legs*.

**L O W**; to carry low. See *Carry*.

**L O Y A L**; A Horse is said

said to be Loyal, that freely bends all his force in obeying and performing any Manage he is put to; and does not defend himself, or resist, notwithstanding his being ill treated.

A *Loyal Mouth*, is an Excellent Mouth, of the nature of such Mouths as we call Mouths with a full rest upon the hand.

L U M P of Flesh. See *Bouillon*.

LUNETTE; A Half Horse-shoe, so called; being a Shoe without the Spunges, (the Part of the Branches that runs towards the Quarters of the Foot being so call'd.) Your Horse has false Quarters; if he is to ride in the Manage, you must shoe him with a Lunette Shoe: But if you design him for the Country, Pantou Shoes are the fittest for him.

*Lunettes* of a Horse, are two small pieces of Felt made round and hollow, to clap upon the Eyes of a vicious Horse that's apt to bite, and strike with his Fore-feet, or that will not suffer his Rider to Mount him.

## M.

**M**ALENDERS are *Chops* or *Chinks* on the Bending or Joint of a Horse's Knee, which sometimes suppurate. When these Chops appear in the Bending of the *Hough*, they are call'd *Sclanders*.

MALT WORM. See *Crepance*.

MANAGE, is a Word that signifies not only the Ground set apart for the Exercise of Riding the *Great Horse*, but likewise the Exercise itself.

The *Manage*, or Ground proper for managing Horses, is sometimes a covered place, as in your great Academies, for continuing the Exercise in bad Weather; sometimes 'tis open, in order to give more liberty and pleasure both to the Horse and the Horse-man. One way or other we always suppose a Center in the middle of the Manage, for regulating the *Rounds* or *Volts*. Sometimes this Center is distinguish'd by a Pillar fix'd in it, to which they tie the Horses that are beginning to learn. Upon the sides of the Manage other Pillars are placed, two by two, in order to teach Horses to raise the Fore-quarters, by tying them with *Ropes*. See *Pillar*.

*Manage* or Exercise of a Horse, is a particular way of working or riding him. Make your Horses work upon the Air and the Manage that you us'd to put 'em most to. This Horse is not yet capable of the Manage. There's a regular exactness and method in the Manage of that *Barb*, he'll work at what Manage you will.

A Horse is said to *Manage* when he Works upon *Volts* and  
*Airs*,



*Airs*, which supposes him broke and bred. Such a Horse manages well upon *Corvets*; he manages well upon *Caprioles*; he manages well, and at equal distances from the Center, or the Pillar that represents it, in the middle of the *Manage-Ground*.

To Manage a Horse upon a *Terra à Terra*. Since this Horse manages so well; he'll passage well from a Walk or a Trot, and will gallop well upon two Treads, and will have less trouble if he gallops one *Haunch* in. Make your Horse manage upon *Corvets*.

A Horse is said to be *thoroughly managed*, or a *Finish'd* Horse, (in *French*, *Achevè*) that is well broke, bred, and confirm'd in a particular Air; or Manage. Here are two Horses but just initiated; but this third Horse is *Achevè*, for he behaves well upon the hand and the heels, he's well put upon the *Haunches*, and works perfectly *Terra à Terra*.

*High-manage*, is the high or rais'd Airs, which are proper for leaping Horses. See *Airs*.

*Manage* for a Soldier's Horse, is a Gallop of unequal swiftness, but so, that the Horse changes hands readily.

**M A N E** (in *French*, *Crinicere*) is the Root of the Hair that grows on the upper part of the Neck. I like your *Rouffin*, or your thick-bodied strong *Dutch* Horse, for he has a Narrow

Mane; and mine, which I do not like, has a Broad Mane like a Coach-horse: And you know very well, that these Broad Manes are generally very mangy, unless great care be taken to prevent it.

*Mane-sheet*, is a sort of Covering over the upper part of a Horse's Head, and all round his Neck, which at one end has two holes for the Ears to pass through, and then joins to the Halter upon the fore-part of the Head, and likewise to the Surcingle, or Long-girth upon the Horse's Back. This Query follows the *English* Custom, in giving his Horses *Mane-Cloths* all Winter, for in *France* they are scarce made use of.

**M A N G E R** is a little rais'd Bench under the Rack in the Stables, made hollow for receiving the Grain or Corn that a Horse eats. This Horse has the Tick, he ticks upon the Manger.

**M A R E**. A Stud-Mare, or Mare for Breed, is one that either is with Foal, or is design'd to be cover'd, in order to raise a Breed or Race of Horses.

**M A R K**. A Horse Marks, that is, he shews his Age by a Black Spot call'd the Bud or Eye of a Bean, which appears about five and a half in the Cavity of the Corner-Teeth, and is gone when the Horse is eight years old; then he ceases to mark, and we say, he has raz'd. See *Teeth* and *Raze*.



*False-Mark'd*; i. e. Counter-mark'd.

**MARTINGAL**, is a Broad Strap made fast to the Girths under the Horse's Belly, and runs between the two Legs, to fasten its other end under the Nose-band of the Bridle. Considering that your Horse has no *Appui* or Stay upon the hand, but tosses up to the Wind, give him a *Martingal*, that will keep him from beating upon the hand. A great many confound a *Martingal* and a *Plate-Longe*.

**MASTIGADOUR**, or *Slabbering-bit*, is a Snaffle of Iron, all smooth, and of a piece, guarded with Pater-nosters, and compos'd of three halves of great Rings, made into Demi-ovals of unequal bigness, the lesser being inclosed within the greatest, which ought to be about half a Foot high. A *Mastigadour* is mounted with a *Head-stall* and two *Reins*. Now the Horse in champing upon the *Mastigadour* keeps his Mouth fresh and moist, by virtue of the Froath and Foam that he draws from his Brain. To put a Horse to the *Mastigadour*, is to fet his *Croupe* to the Manger, and his *Head* between two Pillars in the Stable. Horses that use to hang out their Tongue, can't do it when the *Mastigadour* is on, for that keeps their Tongue so much in subjection, that they can't put it out.

**MES-AIR**, is a Manage

half *Terra à Terra* and half *Corvet*.

**MESMARCHURES**. See *Pastern*.

**MIDDLE-TEETH** of a Horse, are the Four Teeth that come out at Three Years and a half, in the room of other four Foal-teeth, seated between the Nippers and the Corner-teeth; from which Situation they derive the Title of *Middling*. There's one above, and one below on each side of the Jaws. See *Teeth*.

**MOLTEN-GREASE** is a Fermentation or Ebullition of Pituitous and Impure Humours which precipitate and disembody into the Guts, and oftentimes kill a Horse. This Disease does not commonly seize upon any but very Fat Horses over-rid in hot Weather. Mr. *Solleysel* has an excellent Remedy against it in his *Compleat Farrier*.

**MONTER à dos**, or a *Poil*; a French Expression, signifying to mount a Horse bare-back'd, or without a Saddle.

**MONTOIR**, or *Horse-Block*, is a Word deriv'd from *Italy*, where the Riding-Masters mount their Horses from a Stone as high as the Stirrups, without putting their Foot into the Stirrup. Now in *France* no such thing is us'd; but yet the Word *Montoir* is there retain'd, and signifies the Poise or Rest of the Horse-man's left-foot.



foot upon his left Stirrup. Hence *Pied de Montoir* signifies the Left or the Near-foot.

**M O O N-EYES**: A Horse is said to have *Moon-eyes*, when the Weakness of his Eyes increases or decreases according to the Course of the Moon, so that in the Wane of the Moon his Eyes are muddy and troubled, and at New Moon they clear up; but still he's in danger of losing his Eye-sight quite.

**M O R E's Head** implies the Colour of a *Roan-Horse*, who besides the mixture or blending of a *Gray* and a *Bay*, has a *Black Head*, and *Black Extremities*, as the *Mane* and *Tail*. See *Roan*.

**M O T I O N**. This Horse has a pretty *Motion*. This Expression implies the freedom of the *Motion* of the *Fore-legs*, when a Horse bends 'em much upon the *Manage*. But if a Horse trots right out, and keeps his *Body* straight, and his *Head* high, and bends his *Fore-legs* handsomely, then to say he has a pretty *Motion* with him, implies the liberty of the *Action* of the *Forehand*.

**M O U R A I L L E**, or *Bar-nacles*, is an Instrument, commonly of *Iron*, composed of two *Branches*, join'd at one end with a *Hinge*, for the use of the *Farriers*, who take hold of a Horse's *Nose* with it, and keep it tight, by bringing to,

or almost closing the other end of the *Branches*, and so tying 'em with a *Strap*. This they do to hinder a *Horse* to struggle and toss, when they make any *Incision* upon him, or give the *Fire*. Some *Mourailles* are made of *Wood*, with a *Screw*, and this sort is indeed very good.

**M O U T H** of a Horse: The *Compliance* and *Obedience* of a Horse is owing partly to the tender or quick sense of his *Mouth*, which makes him afraid of being hurt by the *Bitt*; and partly to the *Natural Disposition* of his *Members*, and his own inclination to obey. Put your *Horse* back, and by that means you may judge in some measure of the submission and tenderness of his *Mouth*. The *Mouth* is call'd sensible, fine, tender, light and loyal. Your *Horse* has so fine a *Mouth*, that he stops if the *Horse-man* does but bend his *Body* backwards, and raise his *hand*, without staying for the *Pull* or *Check* of the *Bridle*. A *Mouth* is said to be fix'd and certain, when a *Horse* does not chack or beat upon the *hand*. A *Fresh Foaming Mouth*. A *strong desperate spoil'd Mouth*. A *False Mouth* is a *Mouth* that is not at all sensible, though the *Parts* look well, and are all well form'd. This *Horse* has no *Mouth*; he's without a *Mouth*. This *Mouth* is ticklish, *i. e.* the *Horse* is too fearful of the *Bitt*. You must



fix the Ticklish Mouth of this Horse with a *Canon-mouth* a *Trompe*, i. e. all of one piece, only knee'd in the middle; or rather with good Lessons, without which the *Canon-mouth* will not have its effect. You do not know how to preserve your Horse's *Mouth*; you check him too much. See *Bitt*, or *Bitt-mouth*.

A *Mouth* of a Full *Appui*, or rest upon the hand, is one that has not the tender nice sense of some *Fine Mouths*, but nevertheless has a fix'd and certain rest, and suffers a hand that's a little hard, without chacking or beating upon the hand, without bearing down, or resisting the *Bitt*, insomuch that he'll bear a Jerk of the Bridle, without being much mov'd. If you go to the Army, provide yourself a Horse with a *Mouth* that bears a full rest upon the hand; for if you take one of a fine nice tender *Mouth*, and another Horse comes to shock or run against him in a Fight, he'll be apt to rise up upon his two hind-feet, which a Horse of a harder *Mouth* would not do. See *Appui*.

A *Mouth* that bears more than a full rest upon the hand, implies a Horse that does not obey but with great difficulty. You will not readily stop this Horse, for his *Mouth* is above a full *Appui* upon the hand. See *Appui*.

MUSEROLE. See *Nose-band*.

N.

**N** A G; little Nag, or Tit, (in *French*, *Bidet*) is a Horse of a small low Size. *France* produces a great many admirable *Bidets*, which travel and endure fatigue better than all your large Horses.

**N** A I L S of the Bridle-hand. The different Position, or Situation of the Nails of the left Hand of the Horseman, give the Horse a Facility of changing hands, and form his Departure and Stop; by reason that the Motion of the Bridle follows such a Position of the Nails. To give a Horse head, you must turn the Nails downwards; to turn the Horse to the right, you must turn them upwards, moving your hand to the right. To change to the left, you must turn the Nails down, and bear to the left: To stop the Horse, you must turn them upwards, and lift up or raise your Hand.

*Nails* in the street, is a common Expression, pointing to the Wound receiv'd by a Horse in the streets, by setting his foot accidentally upon a Nail, which being planted with the Point up, sometimes runs thro' the Sole, and reaches to the Coffin-Bone, and makes the Horse lame. Your Horse has got a *Street-nail* that will keep him lame long enough.

N A R-



**NARROW**; a Horse that narrows, is one that does not take Ground enough, that do's not bear far enough out to the one hand or to the other. Your Horse narrows too much; to enlarge him, you must assist him with the inside Rein; that is, you must carry your hand to the outside, and press him forward upon strait Lines with the Calves of your Legs. Since your Horse widens too much, you must narrow him, not only in turning him, but likewise in keeping him under, or subject. If he narrows too much, assist him with the Calves of your Legs; nay, prick him, and then bring to with the Out-Spur; that is, the Heel contrary and opposite to the Ground he has quitted, and ought to regain.

**NECK** of a Horse. Your Horse's Neck is charged with Flesh, he has a Cock-thropled Neck, a false Neck, a thick Neck. Such a Horse has a fine well-shap'd rising Neck. I see in your Horse's Neck the Feather which we call the *Roman Sword*. A fleshy Neck; a Neck with the Flesh hanging down on one side. A Mare's Neck; *i. e.* too slender and fine, and but little Flesh upon it. See *Carry well, Carry low*.

**NEIGHING** is the Cry of a Horse. Such a Horse *neighs*.

**NIPPERS** are Four Teeth in the Fore-part of a

Horse's Mouth; two in the upper, and two in the lower Jaw. A Horse puts 'em forth between the second and third Year. See *Teeth*.

*Nippers*. Smiths or Farriers Nippers, (in *French, Tricoiffes*) are the Pincers with which they cut the Nails they have drove in, before they rivet 'em; and which they use in taking off a Shooe.

**NOSE-BAND**, (*Muse-rolle*) is the part of the Head-stall of a Bridle that comes over a Horse's Nose. Since your Horse beats upon the hand, clap a Martingale to his Nose-Band.

**NOUER** *L' Eguillette*. See *Yerk*.

## O.

**OBEY**; A Horse is said to obey the Hands and the Heels, to obey the Aids or Helps; *i. e.* to know and answer 'em according to demand. Such a Horse obeys the Spurs; *i. e.* he flies from them.

**OSSELET**, is a very hard Excrecence, resembling a little Bone, on the inside of the Knee, (and never on the outside) appearing to be of the same substance with the rest of the Knee, and only distinguishable from the Knee by its descending a little lower.

**OVER-DONE**, *Over-rid*, or *Over-work'd*; (in *French,*

*Outrè*) A Horse is so call'd, when his Wind and Strength are broke and exhausted with Fatigue. An incurable purfivè Horse is called in *French*, *Pouffif Outrè*, i. e. Over-done Purfivè.

To *Over-work* a Horse in the Manage, is call'd, *Estrapasser*.

**O V E R - R E A C H**; A Horse is said to over-reach, when he brings his hinder Feet too far forwards, and strikes their Toes against the Spunges of the Fore Shoes. A Horse over-reaches thro' a Weakness in the Back, or by being suffered to bear too much upon the Shoulders.

**O U T**; *Outside*; *Without*. See *In*.

## P.

**P A N N E L S** of a Saddle, are two Cushions, or Bolsters, fill'd with Cow's, or Deer, or Horse Hair, and placed under the Saddle, one on each side, touching the Horses Body; to prevent the Bows and Bands to gall or hurt his Back.

**P A N T O N - S H O E**, is a Horse-shoe contriv'd for recovering narrow and hoof-bound Heels; which has Spunges much thicker on the inside than on the outside; so that the part that rests upon the Horn or Hoof runs slope-wise, to the end that the thickness of the inside of the Shoe may

bear up the Heel, and throw or push it to the outside. *Panton-Shoes* are likewise for such Horses as have false *Quarters*.

**P A R E**; to pare a Horse's Foot, is to cut his Nails; that is, the Horn, and the Sole of his Foot, with a *Butteris*, in order to shoe him. This Foot is well par'd; 'tis par'd without touching the quick. In *England*, the Smith or Farrier holds the Foot of the Horse between his Knees, and in that very posture pares the Foot, sets on the Shoe, drives the Nails, and rivets 'em; and this all alone, without any Assistance from the Groom.

**P A R E R**, a *French* Word us'd in former times in the Academies, implying, to stop: But at present 'tis exploded. And when the Riding-Masters have a mind the Scholar should stop the Horse, they call out, *Holas*. See *Stop*, and *Half-stop*.

**P A R T**, or Depart; (in *French*, *Partir*) a Word us'd in the Academies to signify the Move and Action of a Horse, when put on at speed. Brisk up your Horse when you part. You have no grace in your Parting. If this Horse does but part, or take the Departure with promptness, he has a very just stop. From the Horse's Parting to his Stop there's two hundred Paces of Ground. This Horse parts upon



upon the hand very handsomely. To make your Horse part with a good grace, (*i. e.* to give him head) you must put your Bridle three fingers lower, and prefs gently with your Heels, or only with the Calves of your Legs. See *Echaper*.

To *Part* again. See *Re-part*.

**PASSADE**, is a Tread or Way that a Horse makes oftner than once upon the same Extent of Ground, passing and repassing from one end of its length to the other: Which can't be done without changing the hand, or turning and making a *Demitour* at each of the Extremities of the Ground. Hence it comes, that there are several sorts of Passades, according to the different ways of turning, in order to part or put on again, and return upon the same *Piste*, or Tread; which we call *Closing* the Passade. See *Closc*, and *Serrer*.

A *Passade* of five times, or a *Demivolt* of five times; is a *Demitour* made at the end of the straight Line, one Hip in, in five times of a Gallop upon the Haunches; and at the fifth time, ought to have clos'd the *Demivolt*, and to present upon the Passade-line straight and ready to return. The *Demivolts* of five Times or Periods, are the most common *Airs* of changing the hand, or turning, that are practis'd in the *Academies*.

*Furious Passades*, (*i. e.* upon a full Career) or *French Passades*, are such as are in Duels. To make these Passades, you put your Horse straight forwards, and towards the extremity of the Line make a Half-stop, keeping the Horse straight without traversing; then you make the *Demivolt* at three times, in such a manner, that the third time the Horse presents straight upon the Passade-line, and ready to set out again upon a short Gallop. You continue this short Gallop half the length of the Passade; then you put on furiously at full speed, and at the end of the Passade mark a Half-stop, and then a *Demivolt* of three times. This you continue to do, as long as the Horse's Wind and Strength will hold. This Passade at full speed supposes that the Horse has an excellent Mouth, and requires Strength and Agility both in the Horse and Horseman. There are but few Horses that are capable of it. 'Tis said, that *Monsieur de Belleville*, one of the *French King's* *Querry's*, and a famous Master of the Art of Riding, was the first that christen'd these Passades with a full Career, by the name of *Passades a la Francoise*, *i. e.* Passades after the *French* way.

*Passade* of one time; A Passade in *Pirouette*, or half *Pirouette*, of one time; is a *Demivolt*, or Turn made by the Horse,



Horse, in one time of his Shoulders and Haunches. To make this Passade, which is the perfectest of them all, the Horse should stand straight upon the Passade-line; and then putting forwards, he forms a Half-stop, making falcades two or three times in such a manner that he is still straight upon the Line; and at the last time he prepares to turn nimbly, and retain or fix his Haunches as a Center, so that the Demi-volt is perform'd in only one time of the Shoulders; and tho' the Haunches make likewise a time, they make it in the Center, or upon the same spot and *de ferme à ferme*, as the *French* call it.

The Rais'd or High *Passades*, are those in which the Demi-volts are made in Corvets.

In all *Passades*, the Horse should, in making the Demi-volt, gather and bring in his Body, making his Haunches accompany his Shoulders, without falling back, or not going forward enough each time: And he should go in a straight Line, without traversing or turning his Croupe out of the Line.

PASSAGE; to passage a Horse, is to make him go upon a Walk or Trot upon two Pistes or Treads, between the two Heels and side-ways; so that his Hips make a Tract parallel to that made by his Shoulders. 'Tis but of late

that Passaging upon a Trot has been us'd; for formerly the word *Passage* signified walking a Horse upon two Treads between the two Heels. A Horse is passaged upon two straight Lines, along a Wall or Hedge. He is likewise passaged upon his own length upon Volts, in going side-ways upon a Circle round a Center, the Semi-diameter being about his own length: So that he looks into the Volt, and half his Shoulders go before the Croup. In all Passaging, the Horse's outward Fore-leg must cross or lap a great deal over the other Fore-leg, at every second time that he marks. In a Passage of a Walk, and that of a Trot, the Motion of the Horse is the same; only the one is swifter than the other. See *Haunch in*, and *Length*.

*Passage* upon a straight Line, is a sort of Manage practis'd but little in *France*, but very much in *Italy*, and yet more in *Germany*. For this Manage, they chuse a Horse that is not fiery, but has a good active Motion with him, and leading upon a straight Line upon a Walk or Trot, teach him to lift two Legs together, one before, and one behind, in the form of a St. *Andrew's* Cross; and in setting these two to the Ground to raise the other two alternately, and keep 'em a long while in the Air; and that in such a manner, that at every



every time he gains a foot of Ground forwards. The Beauty of Passaging, consists in holding the Legs long in the Air. The Motion of the Legs in this Passage, is the same with that of a Walk or a Trot; for they go in the same Order, and the only difference is, that in passaging upon a straight Line the Legs are kept longer in the Air. Your proud stately Horses, and those which are accusom'd to this sort of Passage, are proper for a Caroufel, or a Magnificent Shew. The difference of a proud stately Prancing, (in *French*, *Piaffer*) and Passaging, consists only in this, that your stately Horses do the former naturally, and do not keep their Legs so long in the Air, as in passaging right out. But for a *Passage*, there's so much Art requir'd, that a Horse is two or three Years in Breeding to that Manage; and of six Horses, 'tis very much if two of 'em succeed in it.

PASTER-N-JOYNT or *Fetlock* of a Horse's Leg, is a Joynt above the Pastern, which serves for a second Knee in each Fore-leg, and a second Ham or Hough to each Hinder-leg. The Fetlock is apt to be cut by the side of one of the Shoes; and when that happens, we say, a Horse cuts, or interferes. This Sorrel's Fetlock is inflam'd and swell'd. Upon that Horse, I see a Wind-gall by the Fetlock.

Sprains happen upon the Fetlock; and Cratches happen above the Fetlocks behind.

PASTER-N of a Horse, is the lower part of the Leg between the *Fetlock* or *Pastern-Joint* and the *Cronet*. A Horse is short-jointed or long-jointed, according to the shortness or length of the *Pastern*; and the short-jointed is the best. - All the Horses in this Stable are out of order in the *Pasterns*. You see there *Crown-scabs*, *Cratches*, *Clefts*, *Watery Sores*, *Warts*, *Crepances*, *Ring-bones*; and in fine, there is not one of 'em that has a sound clean *Pastern*; nay some of 'em are gall'd with their Locks or Fetters.

Wrenches of the *Pastern* are call'd in *French*, *Entorses* and *Mesnarchures*. You must give the Fire to this *Entorse*, for the Horse is quite lame, and 'tis in vain to try any other Remedies.

PATIN-SHOOE, a *Horse-Shoos* so call'd, under which is solder'd a sort of half-ball of Iron, hollow within: 'Tis us'd for Hip-shot-horses, and put upon a Sound Foot, to the end that the Horse not being able to stand upon that Foot without Pain, may be constrain'd to support himself upon the Lame Foot, and so hinder the Sinews to shrink, and the Haunch to dry up. We likewise clap Patin-shoes upon Horses that are sprain'd in the Shoulders.



**PAW** the Ground. A Horse Paws the Ground, when his Leg being either tired, or painful, he does not rest it upon the Ground, and fears to hurt himself as he walks.

**P E A C H**-Colour. See *Blossom*.

**P E S A T E**, or *Pesade*, or *Posade*, is the Motion of a Horse that in lifting or raising his Fore-quarters, keeps his hind-legs upon the Ground without stirring, so that he marks no time with his *Haunches*, till his Fore-legs reach the Ground. This Motion is the true Means to fix his *Head* and his *Haunches*, to make him ply and bend his Fore-thighs, and to hinder him to stamp and clatter with his Feet. If you design to put your Horse to *Corvets*, make *Pesates* his first Lesson, for *Pesates* are the foundation of all *Airs*. See *Stop* and *Half-stop*.

**P I A F F E U R** is a proud stately Horse, who being full of Mettle, or Fire, restless and forward, with a great deal of Motion and an excessive eagerness to go forwards, makes this Motion the more that you endeavour to keep him in, and bends his Leg up to his Belly: He snorts, traverses if he can, and by his Fiery Action shews his restlessness: Whence some, though very improperly, say, he dances. Such Horses as these, or such as are bred to passage upon a straight Line, are

much admir'd in Caroufels and Magnificent Festivals. See *Snort* and *Passade*.

**P I C K E R**; *Horse-picker* is an Iron Instrument, five or six Inches long, bent or crooked on one side, and flat and pointed on the other, us'd by the Grooms to cleanse the inside of the Manage Horses Feet, and to pick out the Earth and Sand that's got into 'em. Since your Horses are but just come from the Manage, you should order your Groom to take the *Horse-picker* and pick out the Dust that dries up their Feet, and that done, to clap Cows-dung into 'em, to keep 'em moist, and prevent their having *False-quarters*.

**P I E R C E** a Horse's Shooe, Lean and Fat: To pierce Lean, is to pierce it too near the edge of the Iron: To pierce it Fat, is to pierce it further in. You have pricked my Horse, because the Shooe was pierced too fat. This Horse's Shoe has made all the Hoof below the Rivet to split, for 'was pierced too lean. This Farrier pricks the Horses upon the Anvil; that is, he does not pierce his Shoes right, for in striking the Nails through holes that are pierced sometimes too fat, and sometimes too lean; or too near the Quarter, he always pricks the Horses.

**P I L L A R**: Most great Manages have a Pillar fixed in the middle of the Manage-Ground,



Ground, to point out the Center: But all Manages in general have upon the side or circumference other Pillars, plac'd two and two at certain distances; from whence they are call'd the two Pillars; to distinguish 'em from that of the Center. When we speak of the latter, we call it working round the Pillar; and when we refer to the other two, we call it working between the two Pillars.

The Pillar of the Center serves to regulate and adjust the extent of Ground; to the end that the Manage upon *Volts* may be perform'd with method and justness, and that they may work in a Square by rule and measure upon the four Lines of the *Volt*, which ought to be imagin'd at an equal distance from the Center. It serves likewise to break unruly high-Mettled Horses, without endangering the Rider; the Horse being tied to a long Rope, one end of which is made fast to the Pillar, and managed by a Man plac'd by the Pillar, which keeps the Horse in subjection, and hinders him to fly out. To break such an unruly fiery Horse, and make him go forwards, put the *Cavesson* upon him, and make fast the Rope to the middle Ring, and to the Pillar, trot him round the Pillar without any person on his back, and fright him with the Shambrier or Rod, that he may

know it, and fly from the least appearance of a Blow. This done, you may mount him round the Pillar, and put him on, so as that he shall not be able either to rear up, or to stop in order to do mischief; for the dread of the Shambrier will prevent all Disorders, and hinder him to stop. The Duke of *Newcastle* says this is the only case in which the use of the Pillar should be suffer'd; for in general he's so far from approving of the Pillar, that he affirms it only spoils Horses, because round it they only work by roat, and having their Eyes always fix'd upon the same Objects, know not how to manage elsewhere, but instead of obeying the hand and the heels, know nothing but the Rope and the Shambrier. In such Manages as have not this Pillar, you must imagine a place where it should be; that is, you must consider the middle of the Ground as a Center, in order to regulate and facilitate Manages upon Rounds. See *Rope and Ropes*.

The Two Pillars are placed at the distance of two or three Paces, the one from the other. We put a Horse between these, with a Cavesson of Leather or Cord, mounted with two big Ropes that answer from the one Pillar to the other. You must ply your Horse with the Cavesson Ropes, and make him rise between the two Pillars; when

once he has got a habit of curveting with ease, he'll give you a good feat on horseback, and by the liberty of his Posture, make you keep the Counterpoise of your Body, and teach you to stretch out your Hams. Put this Horse between the two Pillars, to teach him to rise before, and when that's done, you'll easily teach him to yerk out behind, and put himself upon rais'd Airs, either by the Aids, or by the Chastisement of the *Shambrier*. Nay, if there be occasion, you may make use of the Switch, the Poinson, the Hand, and the Spurs.

**P I S T E**, is the Tread or Tract that a Horse makes upon the Ground he goes over. This Horse-man observes the *Piste*, he makes it his business to follow the Tread; that is, he follows his Ground regularly, without enlarging or narrowing, without traversing or entangling. Such a Horse works well upon two Treads; he works well with one *Piste*.

**P L A N T E D - C O A T**. See *Hair-staring*.

**P L A T - V E I N S**; (in *French, Ars*) are the Veins in which we bleed Horses, one in the lower part of each Shoulder. When we blood a Horse in the Shoulders, and in the flat part of the Thighs, the Vulgar People cry, He's bled in the four Plat-veins: But 'tis a mistake, instead of saying,

he's bled in all his Four limbs.

**P L A T E - L O N G E**, is a Woven Strap, four Fathom long, as broad as three Fingers, and as thick as one; made use of in the Manage for raising a Horse's Legs, and sometimes for taking him down, in order to facilitate several Operations of the Farrier. Some improperly give the name of *Plate-longe* to a *Martingal*.

**P L U N G E**. See *Estrapade*.

**P O I L**; *Souffler au Poil*, i. e. to run upon the Hair or Skin. A *French* Expression, us'd when a Horse has a prick with a Nail, and for want of being sufficiently open'd underneath, the Matter or Imposthume runs between the Hoof and the Coffin-bone; and rising above the Coffin, gains the Hair, insomuch that it appears at the *Cronet*. See *Hair*.

**P O I N S O N**, is a little Point or Piece of sharp-pointed Iron, fix'd in a wooden Handle, which the Cavalier holds in his right Hand, when he means to prick a Leaping Horse in the Croupe, or beyond the end of the Saddle, in order to make him yerk out behind. Put this Horse between two Pillars, and give him the Aids of the *Poinson*. This Horse obeys the *Poinson*.



**POIRAU.** See *Wart.*

**POINTS,** or Toes of a Bow of a Saddle. See *Bows.*

*Point;* A Horse is said to make a Point, when in working upon Volts, he does not observe the Round regularly, but putting a little out of his ordinary Ground, makes a sort of Angle or Point by his Circular Tread. Your Horse does not make Rounds well; he makes Points. You should prevent it by hastening your hand. See *Hasten.*

**PONTLEVIS,** is a disorderly resisting Action of a Horse, in disobedience to his Rider; in which he rears up several times running, and rises so upon his Hind-legs that he's in danger of coming over. Your Horse makes very dangerous *Pontlevis's*; and considering he is but a weak Horse, a little Resting upon the Bridle would bring him over. This Colt resisted, and was disobedient a long time; and his Defence was to make great *Pontlevis's*: But, knowing he had strength, I took the time when his Fore-feet were returning to the Ground, and clapt my Spurs smartly to him, which broke him at last. Such a Horse doubles his Reins, and makes a *Pontlevis*.

**P O R T E-***Etrier.* See *Stirrup.*

**PORTER,** (to carry) us'd in the *French* Manage for directing or pushing on a

Horse at pleasure; whether forwards, upon turns, &c.

**P O S A D E.** See *Pe-sate.*

**P R E S S** upon the hand. A Horse is said to resist, or press upon the hand, when either thro' the Stiffness of his Neck, or from an ardour to run too much in Head, he stretches his Head against the Horseman's Hand, refuses the Aid of the Hand, and withstands the Effects of the Bridle. My Horse who has a thick fleshy Neck, lyes very heavy upon the hand; but yours, who has too much fire, presses upon the Hand. If your Horse is too fiery, and presses upon the Hand, endeavour to pacify him, by making him go more softly, and pulling him backwards. If it proceeds from a Stiffness of the Shoulders and Neck, you must supple him with a Cavesson made after the Duke of *Newcastle's* way. See *Heavy.*

To *Press,* or push a Horse forwards, is, to assist him with the Calves of your Legs, or to spur him to make him go on.

**P R E S T E S S E;** (a *French* Word, signifying Readiness,) us'd in the Academies, to import the Diligence of a Horse in working in the Manage.

**P R I C K,** or Pinch, (in *French,* *Pincer*) is, to give a Horse a gentle Touch of the Spur, without clapping them hard

hard to him. Prick with the right, pinch with the left, pinch with both. To prick or pinch is an Aid; but to *appuyer*, or bear hard with the Spur, is Correction.

*Pricking of a Horse's Foot*, is the Hurt receiv'd by a Nail drove too far into the Foot, so as to reach the quick, or press the Vein in the Horse's Foot when he's shod. See *Pierce*.

**P U N C H**; a well-set, well-knit Horse; (in *French*, *Gouffant*) is short-back'd, and thick-shoulder'd, with a broad Neck, and well lin'd with flesh. Of all the Baggage-Waggons and Carts of the Army, I see none better drawn than yours; for the Thill-Horse, and the Fore-Horse, are strong well-set Horses.

**P U R S Y N E S S**, or Alteration of the Flank; is an Oppression that deprives a Horse of the Liberty of Respiration; and proceeds from some Obstruction in the Passages of the Lungs. Purfynefs is a Capital and Essential Fault; so that the Seller of the Horse stands obliged to warrant him free from Purfynefs, or to take him again within nine Days after sale. See *Warrant*, and *Wind*.

**P U T**, (in *French*, *Mettre*) is us'd for the Breaking, or Managing of a Horse: As, Put your Horse to Corvets, Put

him upon Caprioles. This Horse puts, and presents himself upon Rais'd Airs. Such a Horse was not well put at first. There's a Barb very well put.

To *Put* a Horse upon his Haunches; (in *French*, *Assesoir*) is, to make him bend 'em in Galloping in the Manage, or upon a Stop. See *Haunches*.

To *Put* a Horse to the Walk, Trot, or Gallop; is to make him walk, trot, or gallop.

To *Put* a Horse under the Button. See *Button*.

**P Y E B A L ' D** Horse, is one that has White-Spots upon a Coat of another Colour. Thus there are *Pyebal'd Bays*; *Pyebal'd Sorrels*, and *Pyebal'd Blacks*; and so of the rest.

**P Y R O E T**. Some are of one Tread, or *Piste*; some of two. Those of one Tread are otherwise call'd *Pirouettes de la tete a la queue*.

*Pyroets de la tete a la queue*, are entire and very narrow Turns made by the Horse upon one Tread, and almost in one time, in such a manner, that his Head is plac'd where his Tail was, without putting out his *Haunches*. To make Horses take this *Pyroet* with more facility, they use in the Manage to put 'em to five or six of 'em all running, without stirring off the Spot. In Duels they are of use to gain the Enemy's *Croupe*. *Pyroettes*,



*Pyroettes* of two Pifts or Treads, are Turns of two Treads upon a finall compafs of Ground, almoft of the length of the Horfe. This Horfe makes his *Pyroette* of two *Pifts* very readily, for he turns fhort and narrow, and keeps his *Haunches* low and well fet.

*Pyroette* of one Time, or *De-mi-pyroette* of one Time, or *Passade* of one Time. See *Passade*.

Q.

**QUARTER.** To work from Quarter to Quarter, is to ride a Horfe three times in end upon the firft of the four Lines of a Square; then change your hand, and ride him three times upon the fecond: At the third time change your hand, and fo pafs to the third and fourth, obferving the fame order.

**QUARTERS** of a Saddle, are the pieces of Leather or Stuff made faft to the lower part of the fides of a Saddle, and hanging down below the Saddle.

*Quarters.* Fore-quarters and Hind-quarters. The Fore-quarters are the Shoulders and the Fore-legs: The Hind-quarters are the Hips and the Legs behind. The two Quarters of this Horfe are equally weak.

*Quarters* of a Horfe's Foot, are the fides of the Coffin, com-

prehended between the Toe and the Heel on one fide and t'other of the Foot. The Inner-quarters are thofe oppofite to one another, facing from one Foot to the other; and thefe are always weaker than the Outside-quarters, which lie on the external fides of the Coffin. See if your Horfe has not got False-quarters.

*Quarter-caft.* A Horfe is faid to caft his Quarter, when for any Diforder in the Coffin we are obliged to cut one of the Quarters of the Hoof: And when the Hoof thus cut grows and comes on anew, 'tis call'd in *French*, *Quartier neuf*; i. e. New Quarter.

*False-Quarters*, (in *French*, *Seime*) is a Cleft in the Horn of a Horfe's Quarters, extending from the *Cronet* to the *Shoe*, which voids Blood, and occafions a great deal of Pain, and makes the Horfe lame. Your Horfe has a *False-quarter*, shoe him with *Pantofle-Shoes*, and keep his Foot fat and eafie. See *Picker*, and *Lunettes*.

**QUITTER-BONE.**  
See *Cratches*.

R.

**RAGOT**, is a Horfe that has Short Legs, a Broad Croupe, and a Strong Thick Body; differs from a *Gouffaut* in this, that the latter has more Shoulders, and a thicker Neck.

E

RAISE:

**RAISE**: To raise a Horse upon *Corvets*, upon *Caprioles*, upon *Pesades*, is to make him work at *Corvets*, *Caprioles*, or *Pesades*. Sometimes we say, Raise the Fore-hand of your Horse. Be sure always to raise your Horse's *Fore-quarters*, after a stop form'd.

*Raise* is likewise us'd for placing a Horse's head right, and making him carry well, and hindring him to carry low, or to arm himself.

**RAKE**. A Horse Rakes when being shoulder-splait, or having strain'd his *Fore-quarter*, he goes so lame, that he drags one of his Fore-legs in a Cern-circle; which is more apparent when he trots, than when he paces.

**RAMINGUE**. A Horse call'd in *French*, *Ramingue*, is a resty sort of Horse that resists the Spurs, or cleaves to the Spurs; that is, defends himself with Malice against the Spurs, sometimes doubles the Reins, and frequently yerks to favour his Disobedience. See *Ticklish*, and *to Double*.

**RAMPIN**. See *Toe*.

**RASE**: To *Rase* or glance upon the Ground (*razér le tapis*) is to gallop near the Ground, as our *English* Horses do. This Horse does not rise enough in his Gallop, he does not raise his *Fore-quarters* high enough, he goes but coldly; his Motions are too near the Ground; he gallops like an *English* Horse.

**RAT-TAILS**, or *Arrests*, signifie callous hard Swellings upon the hinder-legs under the *Hough*, running along the *Sinew*.

*Rat-tail*; a Horse is so call'd when he has no Hair upon his Tail.

**RAZE**. A Horse razes, or has razed; that is, his Corner-teeth cease to be hollow; so that the Cavity where the Black Mark was, is now filled up, the Tooth is even, smooth and raz'd, or shav'd, as'twere, and the Mark disappears. Your Horse has raz'd, and does not mark no more; from whence we conclude that he has almost enter'd into his eighth Year. See *Teeth*.

**REAR up**; (in *French*, *Ca-brer*) is said of a Horse that rises upon his hinder-legs as if he would come quite over. This Horse has a Mouth too sensible, and rises before; if you cleave to the Bridle but never so little, he rises on his hinder-legs, and is in danger of coming quite over.

**REINS** are two Straps of Leather meeting in the Horseman's Bridle-hand, in order to make the Bitt bear, and keep the Horse subject. As soon as you are on Horseback hold your Reins even, and rest your Thumb upon both of 'em, keeping them separated by your Little finger. The Duke of *Newcastle* bestow'd the Name of Reins upon two Straps or Ropes.



Ropes of a *Carveffon*; which he ordered to be made fast to the Girths or the Pommel of the Saddle, with intent that the Rider should pull 'em with his hand, in order to bend and supple the Neck of the Horse.

*False-Rein* is a Lathe of Leather pass'd sometimes through the Arch of the *Banquet*, to bend the Horse's Neck: The Duke of *Newcastle* disapproves the use of it, and says it flacks the Curb, and makes the Bitt no more than a Trench that has no Curb.

REMOLADE, or *Charge*. See *Charge*.

REMOULIN: An old *French* Word, signifying a Star upon a Horse's Forehead.

RENETTE is an Instrument of Polish'd Steel, with which they sound a Prick in a Horse's Foot.

REPART, is to put a Horse on, or make him part a second time. After stopping your Horse, make him repart straight.

REPOLON, is a *Demi-volte*, the *Croupe* in, clos'd at five times. The *Italians* are mighty fond of this sort of Manage. In making a *Demi-volte*, they ride their Horses short, so as to imbrace or take in less Ground, and do not make way enough every time of the *Demi-volte*. The Duke of *Newcastle* does not approve of the *Repolons*; al-

ledging, that to make *Repolons*, is to gallop a Horse for half a Mile; and then to turn awkwardly, and make a false Manage.

REPRISE, is a Lesson repeated, or a Manage recommenced. To give Breath to a Horse upon the Four Corners of the *Volte*, with only one *Reprise*, that is, all with one Breath.

RESTY: A *Resty* Horse; i. e. a malicious unruly Horse that shrugs himself short, and will only go where he pleases. What the *French* call *Ramingue*, has much of the *Resty* in him.

RETAIN; (in *French*, *Retenir*) is what we call hold, in speaking of Mares that conceive and hold after covering.

To RIDE is us'd for learning the Manage. As, these two Gentlemen ride under a very good Master, but the other two ride under a *Great*.

RIDGES, or Wrinkles of a Horse's Mouth; are the Risings of the Flesh in the Roof of his Mouth, which run across from one side of the Jaw to the other, like *Fleshy* Ridges, with interjacent Furrows, or sinking Cavities. 'Tis upon the third or fourth Ridge that we give the Stroke with the *Horn*, in order to blood a Horse whose Mouth is overheated.

RING-BONE, is a Hard Callous Swelling in a Horse's Pasterns, which of-

tentimes makes him very  
Lame.

**RIPOSTE**, is the Vindictive Motion of a Horse that answers the Spur with a Kick of his Foot.

**RIVET** is that extremity of the Nail that rests or leans upon the *Horn* when you shoe a Horse. The Rivets of the Nails that you have drove into my Horse are too great, and will certainly cut him; besides, the Nails are so thick plated, that the Rivets by their bigness and weight will carry off the *Hoof*. Trie him once more with *Limoge* Nails, that the Rivets may be smaller. See *Pierce*.

**ROAN**: A Roan Horse is one of a *Bay*, *Sorrel*, or *Black* Colour, with Grey or White Spots interspers'd very thick. When this Particolour'd Coat is accompany'd with a *Black Head*, and *Black Extremities*, he is call'd a *Roan* with a *Blackamore's Head*; and if the same mixture is predominant upon a deep *Sorrel*, 'tis call'd *Claret-Roan*.

**R O D**, (in *French*, *Gaule*) is a Switch held by the Horseman in his Right-hand, partly to represent a *Sword*, and partly to conduct the Horse, and second the effects of the *Hand* and *Heels*. This Horse takes the Aids of the Switch well. Since this Gentleman has a mind to make his Horse rise before, give him the Aids of the

*Rod*, touch him, switch him upon the *Legs* and the *Counter*, and then he'll up with his *Fore-hand*.

**R O P E**, *Cord* or *Strap*, is a great Strap ty'd round a *Pillar*, to which a Horse is made fast when we begin to quicken and supple him, and teach him to fly from the *Shambrier*, and not to gallop false or uncompactly. In *Manages* that have no *Pillar*, a Man stands in the *Center* of of the *Ground*, holding the end of the *Rope*.

*Ropes*. *Ropes* of two *Pillars* are the *Ropes* or *Reins* of a *Caveffon*, us'd to a Horse that works between two *Pillars*. You must put your Horse to the *Ropes*, that the constraint of the *Caveffon* may make him ply his *Haunches*, and teach him to raise his *Fore-hand*. You'll never make this a good-leaping Horse, unless you put him to the *Ropes*, and make him answer the Aids of the *Poinson*, in yerking with his hind-legs. See *Fore-thigh*.

**R O U N D**, or *Volte*, is a *Circular Tread*. See *Volte*.

To *Cut a Round*. See *Cut*.

To *Round* a Horse, or make him *round* (*arrondir*) is a general Expression for all sort of *Manage* upon *Rounds*: So that to *round* a Horse upon *trot*, *gallop*, or otherwise, is to make him carry his *Shoulders* and his *Haunches* compactly or roundly, upon a greater or smaller *Circle*.



Circle, without traversing or bearing to a side. To round your Horse the better, make use of a *Cord* or *Strap* held in the Center, till he has acquired the habit of *Rounding* and not making *Points*. In working upon *Volts*, you ought never to change your hand, unless it be in pressing your Horse forward, and *rounding* him. See *Points*.

**ROUSSIN** is a strong well knit, well stow'd Horse, such as are commonly carried into *France* from *Germany* and *Holland*; though 'tis true *France* it self produces some such.

**ROWELS** of a Spur. See *Spur*.

**RUBICAN** Colour of a Horse is a *Bay*, *Sorrel*, or *Black*, with a *Light-gray* or *White* upon the Flanks, but so that this *Gray* or *White* is not predominant there.

**RUN**: To run a Horse is to put him to his utmost speed, *i.e.* a furious, quick and resolute Gallop, as long as he can hold it. Some take Running for a Gallop, but in the Academies it signifies as above.

## S.

**SACCADE**, is a Jerk, more or less violent, given by the Horseman to the Horse, in pulling or twitching the Reins of the Bridle all on a sudden, and with one

Pull; and that, when a Horse lyes heavy upon the hand, or obstinately arms himself. This is a Correction us'd to make a Horse Carry well; but it ought to be us'd discreetly, and but seldom.

**SADDLE**, is a Seat upon a Horse's Back, contriv'd for the Conveniency of the Rider. A Hunting-Saddle is compos'd of two Bows, two Bands, Fore-bolsters, Pannels, and Saddle-straps: And the great Saddle has besides these Parts, Corks, Hind-bolsters, and a *Troussequin*. The Pommel is common to both. A Horseman that would fit a Horse well, ought always to fit on his Twist, and never on his Buttocks; which ought never to touch the Saddle; and whatever Disorder the Horse commits, he ought never to move above the Saddle. This Gentleman keeps his Seat well, and never loses the middle of his Saddle. He's always well set in the Saddle.

*Saddle-Back'd*; A Horse is call'd *Saddle-back'd*, that is hard to fit with a Saddle. You must bespeak a Saddle on purpose for your Horse, because his Reins are low, and his Head and Neck rais'd: For all *Saddle-back'd* Horses have a rais'd Head and Neck, and cover a man well.

*Saddle-Case*. See *Houffe*.

*Saddle-Roll.* See *Troussé-quin.*

**SAKER.** See *Dock.*

**SCABBARD**, is the Skin that serves for a Sheath or Case to a Horse's Yard. Your Horse's Scabbard is inflam'd for want of Exercise; you must take him out, and water him.

**SCAB'D Heels**, or Frush, is an eating Putrefaction upon a Horse's Frush; which is very hard to cure, and has a Noisome Smell.

*Crown Scab*, is a Mealy Scurf upon the Pasterns of a Horse, that makes the Hair bristle and stare.

**SCATCH-MOUTH**, is a Bit-Mouth differing from a Canon-Mouth in this, that the Canon is round; whereas a Scatch is more upon the Oval. That part of the Scatch-Mouth which joyns the Bit-Mouth to the Branch is likewise different; a Canon being staid upon the Branch by a *Fonceau*, and a Scatch by a *Chaperon* which surrounds the *Banquet*. The effect of the Scatch-Mouth is somewhat greater than that of the Canon-Mouth, and keeps the Mouth more in subjection. Commonly your Snaffles are *Scatch-Mouths*.

**SCHOOL**, or *Schooling*, (*Ecole*) is the Lesson and the Labour both of the Horse and the Horseman. One of these Gentlemen has

but three Months Schooling, and the other has four. This Horse manages better upon two Months Schooling, than another would have done in six. A School Pace, Gate, or Going, is the same with *Ecoute*. Which see.

**SCRATCHES.** See *Cratches*.

**SCREW.** See *Splent*, and *Through-Splent*.

**SEAT**, is the Posture or Situation of a Horseman upon the Saddle. Teach this Gentleman the Seat; *i. e.* direct him to place himself in a true posture. This Gentleman never loses his *Seat*. See *Counterpoise*.

*Seat* a Horse upon his Haunches or Hips. See *Put*.

**SEEL**; A Horse feels when he begins to have white Eye-brows; which happens when he's fifteen or sixteen Years old.

**SELENDERS**, are Chops or Mangy Sorcs in the Bending of a Horse's Hough, as the Malenders are in the Knees.

**SERPEGER**, a French Word us'd in the Academies, to signify the Riding of a Horse in a Serpentine way, or in a Tread with wav'd Turnings, like the Posture of a Serpent's Body. This word is now obsolete.

**SERPENTINE.** A Serpentine Tongue is a frisking Tongue that's always a



moving, and sometimes passes over the Bit, instead of keeping in the void Space, call'd the Liberty of the Tongue.

**S E V I L** of the Branches of a Bridle, is a Nail turn'd round like a Ring, with a large head, made fast in the lower part of the Branch, call'd *Gargouille*. See *Banquet*.

**S H A M B R I E R** is a long Thong of Leather, made fast to the end of a Cane or Stick, in order to animate a Horse, and punish him, if he refuses to obey the Rider. To make this Horse obedient, take a Shambrier in your hand; shew it him; crack it against the Ground; make him feel it.

**S H A N K** of a Horse's Leg, is that part of the Fore-leg that lyes between the Knee and the Fetlock, or Pastern-Joynt. Your Horse has a Thorough Splent upon his Shank. See if there is not a *Fuzee* (*i. e.* two Splents joyning to one another) on the Shank of that Sorrel. Here's a very uncommon thing upon the Shank of this Barb; He has an Arrest, or Mangy Tumor all along the Sinew of the Shank, down to the Pastern-Joynt. For commonly Arrests happen in the Hind-Quarter; and Barbs are never troubled with 'em.

**S H E D D I N G** of the Hair. See *Cast*.

**S H E E T**. Horse-sheet. See *Caparasson*.

**S H E L L - T o o t h ' d H o r s e**, (in *French*, *Raigu*) is one, that from five Years to old Age, naturally, and without any Artifice, bears Mark in all his Fore-teeth; and there still keeps that hollow place, with a black Mark which we call *Germe de Fève*, or the Eye of a Bean: Insomuch, that at twelve or fifteen, he appears with the Mark of a Horse that is not yet six. For in the Nippers or other Horses, the hollow place is fill'd, and the Mark disappears, towards the sixth Year, by reason of the wearing of the Tooth. About the same Age, 'tis half worn out in the Middling Teeth: And towards the eighth Year, it disappears in the Corner-Teeth. But after a Shell-Tooth'd Horse has marked, he marks still equally in the Nippers, the Midling, and the Corner-Teeth: Which proceeds from this; that having harder Teeth than the other Horses, his Teeth do not wear, and so he does not lose the black Spot. Among the *Polish*, *Hungarian*, and *Croatian* Horses, we find a great many hollow-tooth'd Horses; and generally the Mares are more apt to be

such

Such than the Horses. Do not you see that your Horse-Merchant is like all other Jockeys, in denying, for his own Interest, that he has any hollow-tooth'd Horses? Certainly this Runner is hollow-tooth'd; for besides that it bears Mark still in all the Fore-Teeth, it ought to have its Teeth short, clean, and white; whereas they are long, yellow, foul, and unlesh'd; which betrays his Age: And I'll lay you a Wager, that in a Year's time he will have Seel, or white Eye-brows.

**SHOE** of a Horse, is a piece of flat Iron with two Branches, or Wings, which being commonly forged according to the Form of the Hoof for which 'tis design'd, is made round at the Toe, and open at the Heel. Such a Farrier has Shoes for all Feet. Now a Shoe for all Feet, is a Shoe cut at the Toe into two equal parts; which are joyn'd by a riveted Nail, upon which they are moveable, in such a manner, that the Shoe is enlarged or contracted, less or more, in order to fit all sorts of Feet. This Horse has a brittle Foot, or a brittle Hoof; you must shoe him in the Wane of the Moon. A Fore-shoe, a Hinder-shoe; A Horse unshod before and behind. 'Tis troublesome to shoe this Horse, for his Foot

is worn, and he has gone a long time unshod. To shoe a Horse after the form of a Lunette, a Pattin, &c. See those Words.

*Shoeing Hammer*, is a Hammer that the Farrier makes use of, to adjust and fit the Shoes upon the Anvil, both hot and cold.

**SHORT-JOYNTED.** A Horse is said to be short-joynted, that has a short Pastern. When this Joynt, or the Pastern, is too short, the Horse is subject to have his Fore-legs, from the Knee to the Cronet, all in a straight Line. Commonly your short-joynted Horses do not Manage so well as the long-joynted; but out of the Manage the short-joynted are the best for Travel or Fatigue. Your Horse is short-joynted, and *bouté*; that is, his Legs are straight, from the Knee to the Cronet. See *Bouleté*, and *Bouté*.

**SHOULDER** of a Horse, is the Joynt in the Fore-quarters that joyns the end of the Shoulder-blade with the extremity of the Fore-thigh.

*Shoulder* of a Branch, is that part of it which begins at the lower part of the Arch of the Banquet, over against the middle of the *Fonceau*, or *Chaperon*, and forms another Arch under the *Banquet*. The Shoulder of a Branch



Branch casts a greater or lesser Circumference, according as 'tis design'd to fortify, or weaken, the Branch. Your Horse's Bridle raises him well enough; but as for that other Bridle, that has too large a Shoulder, do not you see how it draws the Horse's Head between his Legs? See *Banquet*.

*Shoulder* of a Horse, is that part of his Fore-hand that lyes between the Withers, the Fore-thigh, the Counter, and the Ribs. Your Horse throws himself too much upon his Shoulders, and he sits heavy upon the hand, for want of Porting, or Seating himself upon his Haunches, and bending his Hocks. Make your Horse's Hips sustain his Shoulders, and his Fore-quarters; then you'll have him light upon the hand, and well coupled. A good Horse should be light in the Shoulders, and subject in the Hip. This Sorrel is *Shoulder-splait*. That Horse has got the *Spear-Feather* in his Shoulder; which is a good Mark. See *Spear-Feather*, *Shoulder-splait*, and *Supple*.

*Shoulder-pegg'd*, (*Chevilles*) are so call'd when they are gourdy, stiff, and almost without Motion. A Horse charg'd with Shoulders, is a Horse that has thick, fleshy, and heavy Shoulders. Your

Horse over-reaches, because he goes too much upon his Shoulders.

*Shoulder-splait*; a Horse is said to be such when he has given his Shoulder so violent a thock as to disjoint the *Shoulder-bone* from the *Body*. Your Horse rakes as he trots, and halts so down to the Ground, that I believe he's *Shoulder-splait*.

**SIDE**; to ride a Horse side-ways, is to passage him, or make him go upon two Treads, one of which is mark'd by his Shoulders, and the other by his Haunches.

**SIGUETTE**, is a Cavesson of Iron, with Teeth or Notches; that is, a Semi-Circle of hollow and vaulted Iron, with Teeth like a Saw, consisting of two or three pieces joyn'd with Hinges, and mounted with a Head-stall and two Ropes, as if they were the Cavessons that in former times were wont to be put upon the Nose of a fiery stiff-headed Horse, in order to keep him in subjection. There is a sort of *Siguette* that's a round Iron all of one piece, sew'd under the Nose-band of the Bridle, that it may not be in View. This *Siguette* we employ with a Martingale, when a Horse beats upon the hand.

**SINEW**; *Unsinew* a Horse, (in French, *Enraver*)

is to cut the two Tendons on the side of his Head, about five inches under the Eyes; which two joyn in one at the Tip or end of the Nose, in order to perform its Motion. This Tendon at the Tip of the Nose is likewise cut. We unfinew, in order to dry the Head, and make it smaller. Upon the whole, the Word *Enerver*, or *Eneruate*, is improper to be us'd on this occasion; for 'tis not a Nerve, but a Tendon, that's cut.

*Sinew-shrunk*; A Horse is said to be Sinew-shrunk, when he is over-rid, and so born down with Fatigue, that he becomes gaunt-belly'd thro' a Stiffness and Contraction of the two Sinews that are under his Belly.

*Sinew-Sprung*, is a violent Attaint or Over-reach, in which a Horse strikes the Toe of his hinder-feet against the Sinew of the Fore-legs.

*SKITTISH Horse*, (in *French*, *Ecouteux*, and *Retenu*) is one that leaps instead of going forward, that does not set out or part from the hand freely, nor imploy himself as he ought to do. Put that Horse on; he's skittish. 'Tis too much trouble to make such a Horse go forward; he's only fit to run upon a Squadron.

*SLABBERING-BIT*. See *Mastigadour*.

*SLACK a Leg*, (in *French*, *mollir la jambe*) is said of a Horse when he trips or stumbles. This Horse slackens strangely, after one hours hunting, and mine has kept in with the Stag till he was kill'd, without slackening, though he be but a Lath-back.

*Slack the hand*, is to slack the Bridle, or give a Horse head.

*SNAFFLE*, after the *English* Fashion, is a very slender *Bitt-mouth* without any Branches: The *English* make much use of 'em, and scarce use any true Bridles, but in the Service of War. The *French* call 'em *Bridons* by way of distinction from *Brides*; i.e. *Bridles*. See to *Rest beavy*.

*Snaffle*, or small *Watering-bitt*, is commonly a *Scatch-mouth*, accoutred with two little very straight Branches, and a Curb, and mounted with a Head-stall and two long Reins of *Hungary* Leather. To put a Horse in a *Snaffle* to dress or curry him. To lead a Horse to Water in a *Snaffle*. To hold a Horse with a *Snaffle* between two Pillars in the Stables. To turn a Horse to the *Snaffle* (*aus flet*) is to set his *Croupe* to the Manger, and his *Head* between two Pillars, to hinder him to feed.

*SNORT*, *Snuffler*, *Snuff*, (in *French*, *Ebrouer*) implies a certain Sound that a Horse full of fire breathes thro' his



Nostrils; and sounds as if he had a mind to expel something that were in his Nose, and hinder'd him to take breath. This Noise or Sound is perform'd by the means of a Cartilage within the Nostrils, call'd in *French*, *Souris*. Horses of much Mettle snort when you offer to keep them in. 'Tis plain, your Horse is well winded, for he snorts every Turn of the Gallop, and that's a sign his Lungs are good. The Word (*Ebrouer*) is expressive in the *French*; for they have no Word of an equivalent Signification to it. See *Souris*.

**SOLE:** To take out the *Sole*, is to do it without touching the *Horn* of the *Hoof*; for if you take off the *Horn*, you make a *Hoof-cast*. We take out the *Sole* for several Infirmities, as you may see in Mr. *Solleysel's Compleat Horseman*. A Horse that's unsoled may recover in less than a Month:

*High-sol'd*, (in *French*, *Pied Comble*) a Horse whose *Sole* is round underneath, so that 'tis higher than the *Hoof*, which oftentimes makes the Horse halt, and hinders the shoeing of him, unless the Shoe's vaulted.

*Sole* of a Horse is a Nail, or sort of *Horn* under the *Foot*, which is much tenderer than the other *Horn* that incompasses the *Foot*, and by reason of its hardness, is properly called the *Horn*

or *Hoof*. A Horse's Shoe ought to be so set upon the *Hoof*, as not to bear upon the *Sole*; for otherwise the *Sole* would be hurt, and not only make the Horse lame, but corrupt the Flesh that separates it from the *Coffin-bone*. I take it, there's a Fig in this Horse's *Sole*, but t'other is furbated.

**SORREL** is a Reddish Colour, with which the Mane ought to be Red or White: 'Tis distinguish'd according to the Degrees of its deepness, into a *Burnt-Sorrel*, and a *Bright* or *Light-Sorrel*; but generally speaking, 'tis a sign of a good Horse. This *Burnt-Sorrel* does not belie his Colour. He makes good the Proverb, *A Burnt-Sorrel will die before he's tyred*: For, in effect, you can never overdoe this Horse; and when other Horses are quite gone, he is still brisk; but for that *Light-Sorrel*, with the pale Extremities, that is, the Hair of whose Extremities, *i. e.* Mane and Tale, is less tinged and whiter than the rest, he's scarce able to bear his own Tail; and though you have never so sharp Spurs, you can't ride him an hour, but he becomes insensible and heedless both of the Spur and the Whip; for these pale out-parts are frequently a sign of Weakness, and lower the Value of a Horse.

**SOUND**, (in *French*, *Droit*); a Horse is such that does not halt. When a Jockey tells

sells a Horse, he warrants him *found* hot and cold; that is, that he does not halt neither when you mount him, nor when he's heated, nor yet after alighting, when he stands and cools.

**SOURIS** is a *Cartilage* in the Nostrils of a Horse, by the means of which he snorts. See *Snort*.

The cutting of this *Cartilage* is call'd in *French* *Essourisfer*.

**S O U S - S U I.** See *Haunches*.

**SPAVIN:** *Ox-Spavin*, is a Swelling in the lower part of the inside of the *Hough*; which for the most part makes the Horse lame.

*Dry-Spavin*, or *String-halt*, is a Stiffness or Gourdiness of the *Ham*, so that the Horse can't bend it, but is constrain'd to lift the *Hip* and the *Leg* all at once, without bending the *Ham*.

*Blood-Spavin* is a Tumor on the inside of the *Thigh*, near the place where the *Curb* is seated. The *Crunal-Vein* disembogues in this part, which makes a soft and painless Swelling.

**SPEAR:** The Feather of a Horse call'd the *Stroke of the Spear*, is a Mark in the Neck, or near the Shoulder of some *Barbs*, and some *Turky* and *Spanish* Horses, representing the Blow or Cut of a *Spear* in those Places, with some appearance

of a Scar, as'twere. This Feather is an infallible sign of a good Horse.

*Spear-hand*, or *Sword-hand* of a Horse-man is his Right-hand.

*Spear-foot* of a Horse is the Ear-foot behind. Your Horse has a White in the Far-hind-foot. See *Foot*.

**SPLÉNT** is a Callous or hard Swelling upon the *Shank-bone* of a Horse, on the inside, below the *Knee*; and sometimes on the outside.

*Thorough-Splént*, or *Pegg'd-Splént* is a *Double Splént*, one on the outside, and another on the inside of the *Shank*, the one over-against the other.

**SPUNGE** of a Horse-shoe, is the extremity or point of the Shoe that answers to the Horse's *Heel*, upon which the *Calkins* are made. Never make Thick Sponges to your Horse-shoes, for that ruins *Heels*.

**SPUR** is a small piece of Iron, of two Branches, bended in the form of a Semicircle, for receiving the Horse-man's *Heel* in their Cavity. In the middle they have a *Rowel*, *i. e.* a small piece of Iron, with eight or ten Points or Sharp Ends, to prick the Horse's Sides withal upon occasion, and sometimes to the very Quick. This Horse knows no Spur, that is, he is not sensible of it. Such a Horse obeys the Spurs; that is, he flies 'em. This Horse is sensible of the Spur, he flies the Spur;



Spur; he answers the Aids of the Spur. A Ticklish Horse cleaves to the Spur. Bring to your Spur: Put on with it. Sometimes we call this Pricking; Sometimes we say a Horse obeys the Heels; knows the Heels. See *Prick* and *Heel*.

**S Q U A R E.** To work in a *Squadre*. The *Piste* or *Tread* of a *Volte*; instead of being always circular, and trac'd upon a circumference round a Center, ought likewise to be imagin'd so as if it formed four straight equal Lines laid, run in a Square, and equally remov'd from the Center or the Pillar which represents it in the middle of the Manage-Ground: So that to work in a *Square*, is to ride along each of these four Lines, turning the hand at every Corner, and so passing from one Line to another.

**S T A B L E S.** See *Ecurie*.

**S T A G - E V I L.** See *Hart*.

**S T A L L I O N,** (in *French*, *Etalon*, or *Etelon*) is a Stone-horse shut up in a Breed with Stud-Mares, for making a Breed or Race of Horses. To give the *Stallion* to Mares; to make a *Stallion* cover a Mare in hand, is to hold the *Stallion* by the Halter or Bridle while he covers her. In our Breed, when we suffer the *Stallions* to cover the Mares,

we always leave 'em loose and at liberty, and never have 'em covered in hand. The Duke of *Newcastle* does not approve of the covering of Mares in the hand; he affirms they ought to be left to their natural liberty, by which means the Foal will be of a better make. See *Breed*.

**S T A R T I N G,** *Skittish*, *Timorous*. A Horse is said to be such, that takes every Object he sees to be otherwise than it is, upon which he stops, flies out, and starts suddenly to one side, insomuch that the Rider can't make him come near it. This Fault is more common to *Geldings* than to *Stone-horses*. The Horses that have bad Eyes are subject to it, as well as those that have been long kept in a Stable without airing; but the latter are easily cur'd of it. When you have a skittish Horse, never beat him in his consternation, but make him advance gently, and with soft means to the Scare-crow that alarms him, till he discovers it, and gains assurance.

**S T A T E L Y,** a Horse that goes with a proud stately strutting Gate, is call'd in *French*, *Piaffur*: Which see.

**S T A Y;** to stay the Hand, to stay or sustain the Horse, is to hold the Bridle firm and high. The least stay or support of your hand will stop your Horse. We likewise sustain or stay a Horse

Horse with the In-leg, or the In-heel, when he makes his *Croupe* go before his *Shoulders* upon *Volts*. We stay a Horse again, when we hinder him to traverse, when we ride him equally, keeping him always subject, so that his *Croupe* can't slip out, and he can't loose neither his Cadence, nor his Ground, but marks all his times equal.

**S T E P.** See *Walk*.

*Step and a Leap.* The Air of a Step and a Leap, is the high Manage of a Horse, that between two Leaps, or *Caprioles*, marks a *Corvet*, which upon this occasion is call'd a Step, in such a manner, that at every Leap or *Capriole*, he raises his Fore-legs, and his *Haunches* follow, yerking or striking out his hind-legs at the end of every Leap. When a Horse inclines to this sort of Manage, we put him forward with the Aids of the hand, the Calves of the Legs, the *Poinson* and the *Heel*, which should be all dexterously employed to make him lift before and behind, and give him a good *Appui* or stay. See *Time*.

*Two Steps and a Leap*, is a Manage or Air compounded of two *Corvets*, terminating in a *Capriole*.

**S T I F F L E**, or Great Muscle, is the part of the hind-leg which advances towards a Horse's Belly, and is a

most dangerous part to receive a Blow upon.

**S T I R R U P**, is a Rest for a Rider's Foot, composed of some small Pieces of Iron forged into Barrs, and level below, but arch'd in the upper part, by which side they are hung in Stirrup-Leathers. Bear vigorously upon your Stirrup, when you have your Foot in it; and hold the Point of your Foot higher than the Heel. When you would stop your Horse, you must bear upon your Stirrups.

You should keep your Right-stirrup half a Point shorter than the Left, for in Combat the Horse-man bears and rests more upon the Right; and to facilitate the mounting of your Horse, the Left-stirrup should be somewhat longer than the other. Shorten your *Stirrup* one Point; let it down a Point. Fit your *Stirrup* to the Point that suits you. Give your Horse way with your *Stirrups* unbuckled and dangling, that they may strike against his Flank, and accustom him to the *Spir*.

To loose ones *Stirrups*, is to suffer 'em to slip from the *Foot*. Take care you do not lose you *Stirrups*. You have lost your Right-stirrup upon a small Yerk or two.

The *Stirrup-foot*, or the *Nearfore-foot*, is the *Left-foot* before.



*Stirrup-Leather* is a *Lathe* or *Thong* of *Leather*, descending from the *Saddle* down by the *Horse's* *Ribs*, upon which the *Stirrups* hang.

*Stirrup-bearer*; (in *French*, *Porte Etrier*) is an *End* of *Leather* made fast to the *End* of the *Saddle*, to truss up the *Stirrups* when the *Rider* is alighted, and the *Horse* sent to the *Stable*.

**S T O P**, is a *Pause* or *Discontinuation* of *Going*. To form a *Stop*, is to stop upon the *Haunches*. Acquaint these *Gentlemen*, that to form the *Stop* of a *Horse*, they must, in the first place, bring to the *Calves* of their *Legs*, to animate him; bend their *Body* backwards, raise the *Bridle-hand* without moving the *Elbow*; then vigorously extend their *Hams*, and rest upon the *Stirrups*, to make him form the *Times* or *Motions* of his *Stop* in *falcading* with his *Haunches* three or four times. I form'd the *Stop* of my *Horse* in the three or four times; *i. e.* making him *falcade* upon his *Haunches*. Your *Horse* forms his *Stop* ungracefully; for he does not bend his *Haunches*; he traverses, and beats upon the hand. This *Horse*, from parting to stopping, has held a *Career* of a *Hundred Paces*; and, after marking the

*Stop*, made a *Pesate* or two at last. Do not form the *Stops* of your *Horse* so short and precipitant; unless you have a mind to spoil his *Hams*, and his *Mouth*. After stopping your *Horse*, make him give two or three *Corvets*. The opposite Term to *Stop* is *Parting*. In former times, the *Stop* of a *Horse* was call'd *Parade*. See *Raise*, and *Nails*.

*Half a Stop*, is a *Stop* not finish'd by a *Pesate*; so that the *Horse*, after *falcading* three or four times upon the *Haunches*, resumes and continues his *Gallop*, without making *Pesates* or *Corvets*. Do not you admire this *Spanish* *Horse* that makes such good *Passades*? Mind how he *Gallops* in a *straight Line*, as he is push'd, and how he forms a *Half-stop*, making *Falcades* three or four times with his *Haunches* very low. You say well, that if he after that made a *Pesate* or two, 'twould be a compleat *Stop*: But you see, that instead of a *Pesate*, he makes his *Demivolt* in three times, and resumes his *Gallop* upon a *straight Line*, in order to do as much at the end of the *Passade*. Come and see my *Barbary* *Horse*; who in his *Galopade* will make twenty *Half-stops*, and resume his *Listening Gallop* with the same

same Cadence, without heat or disquiet. One may truly say of this Barb, that the Rider has his Will in his hand. See *Falcode*, *Passade*, and *Pesate*.

**S T R A I G H T.** To part or go *straight* or *right out*, is to go upon a Tread-traced in a *Straight-Line*. This Horse makes *Corvets* equally well, straight, and upon *Volts*. When you would push your Horse forwards, make him part straight, and put him back straight, without traversing or bearing side-wise.

*Straight - Member'd*, (in French, *Droit sur les jambes*) See *Legs*.

**S T R A I N**, *Sprain*, or *Swaying*, (in French, *Effort*) is a violent Extension of the Sinews, or Relaxation of the Muscles, that keep a Horse's Bones tight in their Articulations: And the Word *Effort* is likewise us'd for a Rupture of any Vein. This Horse is Hip-hot, Shoulder-splait, Sway'd in the Back. See *Shoulder-splait*.

**S T R A N G L E S**, is a Collection of foul Humors form'd in the Body of a young Colt; which are voided by the Nostrils, or by a Suppuration of some Glands or Knots that lye between the Bones of the lower Jaw, and are crowded with Impurities.

The false Strangles happen in old Horses; that have not well cast the Strangles.

**S T R A P S** of a Saddle, are small Leather Straps, nail'd to the Bows of the Saddle, with which we make the Girths fast to the Saddle.

**S T R I K E** a Nail, is to drive it thro' the Horse's Shoe, and the Horn or Hoof of his Foot; and to rivet it for holding on the Shoe. Since your Horse has commonly much Hoof at the Toes of his Fore-feet; the Farrier may strike high there without fearing the coming upon the quick: And as for the Hinder-feet, he ought to strike pretty high upon the Quarter or Heel, but low at the Toe; because there the Hoof is near the quick. See *Pierce*, and *Pricking*.

To *Strike* a Vein. See *Barr*.

**S T R I N G - H A L T.** See *Dry Sparvin*.

**S T U B**, (in French, *Chicot*) is a Splinter of fresh cut under-Wood, that gets into a Horse's Foot as he runs; and piercing the Sole thro' to the quick, becomes more or less dangerous, according as it sinks more or less into the Foot.



**SUBJECT**; To keep a Horse subject, is an Expression relating to Volts; signifying, to keep the Croup of the Horse in the Round, so that it may not slip out; that he may not traverse, and that he may work in the Manage, Croup in, marking his equal Times, without losing his Ground.

**SUPPLE** a Horse, is to make him bend his Neck, Shoulders, and Sides; and to render all the Parts of his Body more pliable. Your Horse has a stiff Neck and Shoulders; he has no Motion with his Leg: You must try to supple him with a Cavesson made after the Duke of Newcastle's way; and Trot and Gallop him, so as to make him turn frequently from a Trot to a Gallop.

**SURBATING**, is a Corruption of the Flesh under the Sole of a Horse, which is bruised and spoiled by the Sole, when a Horse runs long unshod, and the Sole is over-dry'd, and withered.

**SWEATING-IRON**, or Knife, is a piece of a Sythe about a Foot long, and of the breadth of three or four Fingers, very thin, and such as cuts only with one side. When a Horse is very hot, and the Grooms have a mind to lessen the Sweat, or make it glide off,

they take this Knife or Iron in their Two Hands, and gently run the Cutting Edge along the Horse's Skin, commonly with the Grain, or as the Hair lies, and but seldom against it; with intent to scrape off the Sweat, and dry the Horse.

**SWORD-Hand**, or *Spear-hand*, is the Right-hand of the Horse-man; the Left-hand is call'd the Bridle-hand.

## T.

**TAIL** of a Horse. A great many affirm, that the Dock of a Horse's Tail serves to point out his sixth or seventh Year; pleading, that about the time that the black Speck, or Eye of the Bean begins to disappear, and the Cavity to be fill'd, the Dock of the Tail becomes longer, by reason that the Vigour of the young Years begins to abate, and Nature has not strength enough to nourish and keep up the Joints or Knots that form the Dock; so that when the Horse is six Years old, one of these Joints slackens, and begins to fall down; and a Year after, another descends in like manner. But this Relaxation, or Down-falling, happens sooner in some than in others, according as they have been well, or ill kept, with refer-



rence to Feeding, Housing, and Working. Accordingly we find the Marks of a Horse's Age taken from his Tail, are so erroneous, that we see a great many Jockeys maintain, that the first Joynt descends when he is nine, and the second when he is ten Years old.

T E E T H, are little Bones in a Horse's Jaws, which serve not only to facilitate the Nourishment, but likewise to distinguish the Age of Horses. A Horse has forty Teeth, including the Tushes; which are distinguished as follows.

Four and Twenty of 'em are call'd the *Grinders*, which are plac'd at the bottom of the Mouth, beyond the Barrs, Twelve on each side of the Channel, *viz.* six above, and six below, on each side. These Teeth continue, and do not fall, to give place to new Teeth in their room; so that they are of no use in distinguishing a Horse's Age. However, they are subject to Wolves Teeth.

With reference to the other Sixteen, Twelve of 'em are call'd in their infancy *Milk* or *Foal-Teeth*, and the remaining Four go by the name of *Tushes*.

The Twelve *Foal-Teeth*, are short, small, and white Teeth, seated on the Fore-part of the Mouth, Six above

and Six below. These change and cast, to give place to others; which, in process of time, become long, large, and yellowish. These new Teeth are distinguish'd by the different Names given them according to their putting forth; and 'tis the manner of their coming forth that gives us to know the first Years of a Horse. Now of these Twelve, Four are call'd *Nippers*, Four are named *Middling Teeth*, and Four go by the Name of *Corner Teeth*.

The Four *Nippers* are seated in the Fore-part of the Mouth, Two above, and Two below. When a Horse has put forth these, we conclude, that he goes from Two and a half to Three Years.

The *Middling Teeth* are plac'd near the *Nippers*, or *Gatherers*, One above, and One below, on each side of the Jaws. They come out and appear between Three and a half and Four Years.

The *Corner-Teeth* are plac'd yet more forward in the Mouth, One above, and One below, on each side of the Jaws. These begin to shoot between the Fourth and the Fifth Year, and are got above the Gum at Five Years. Now, surmounting the Gum at that Age, they become hollow, and *mark* commonly till Seven or Eight Years.



Years. By *Marking*, we mean, that in the Hollow, or Cavity of the Corner-Teeth, a little blackish Speck is form'd; which, from its Resemblance, we call the Bud or Eye of a Bean. But when the Horse passes Six, this Cavity begins to fill, and the black Mark disappears by degrees; and this Diminution of the Cavity and the Mark, continues from Six to Seven and a half. At Eight Years, the Cavity is fill'd up, and the black Mark is gone; and in regard that the Tooth is then full, even, and smooth as if it had been shav'd, we then say, that the Horse has raz'd. Which happens a little before the Eighth Year; and after that the Horse does not Mark; so that the surest Knowledge of his Age is then took from the Tusshes.

The Tusshes are plac'd beyond the Corner-Teeth upon the Barrs, Two on each side of the Jaws, *i. e.* One above; and One below, without being preceded by any Foal-Teeth. The Two Under-Tusshes cut sometimes at Three Years, sometimes at Three and a half, and sometimes Four: But the Two Upper-Tusshes appear sometimes at Four, and sometimes at Four and a half; sometimes before; and sometimes after the Cor-

ner-Teeth, without any certain Rule: And till the Age of Six they are chamfer'd within. About Ten Years of Age the two upper Tusshes appear much worn; which serves for an indication of that Age. After that, they grow out in length, and become bare of Flesh, because the Gum shrinks, and retires: And at last, about the Fifteenth or Sixteenth Year, the Horse feels. A Horse is not capable of any great Fatigue, till his Tusshes have cut the Skin. Most of the *Dutch* Horses are very sick when their Tusshes come forth. Mares have 'em but seldom, and when they have 'em they are very small. See *Shell-tooth'd*, and *Counter-mark'd*.

In speaking of the *Teeth*, we say such a Horse has cast his under *Milk-teeth*; he has cast his *Corner-teeth*, or his *Nippers*; he has put forth his *Nippers*. This *Sorrel* has chang'd his *Teeth*, and cast his *Nippers*. This Horse is unlucky both with his *Feet* and his *Teeth*, you must get him cut or gelt.

T E N D O N: To cure a Horse's *Tendon*. The *Tendon* is a sort of a Gristle that surrounds one part of the *Foot*, and is seated between the *Hocf*, and the *Coffin-bone*, near the *Cronet*. When a Horse has a *Quitter-bone*, the Matter that



gathers between the *Coffin-bone* and the *Hoof*, spoils the *Tendon*, and makes it black; and the Cure of such a *Quitter-bone* consists in cutting and extirpating the *Tendon*.

**TERRA A TERRA**, is a Series of low Leaps, which a Horse makes forwards, bearing side-ways, and working upon two Treads. In this Motion the Horse lifts both his Forelegs at once; and when these are upon the point of descending to the Ground, the Hinder-legs accompany 'em with a short and quick Cadence, always bearing and staying upon his *Haunches*; so that the Motions of the Hinder-quarters are short and quick; and the Horse being always well prest and coupled, he lifts his Fore-legs pretty high, and his Hinder-legs keeps always low and near the Ground. This Manage is call'd *Terra à Terra*, because in this Motion the Horse does not lift his Legs so high as in *Corvets*. Such a Horse works very well at the *Terra à Terra*. See *Six Volts*.

**TERRAIGNOL**. A Horse so call'd, is one that cleaves to the Ground, that can't be made light upon the hand, that can't be put upon his *Haunches*, that raises his Fore-quarters with difficulty, that's charg'd with Shoulders, and in general, one whose Mo-

tions are all short and too near the Ground.

**TERRAIN**, is the Manage-ground upon which the Horse marks his *Piste* or Tread. This Horse observes his ground well; he keeps his ground well; he imbraces his ground well, without enlarging or narrowing more to one hand than to another.

**TET T A R** is an Ulcer almost as broad as one's hand, that appears commonly upon a Horse's *Croupe*, sometimes on his *Head*, and sometimes upon his Neck. It proceeds from *Bilious Blood*, that consumes and eats through the Hide or Skin, and causes such a violent Itching, that 'tis a hard matter to keep the Horse from scratching, and so enlarging or spreading the Ulcer. This Disorder was not known till of late.

**THIGHS** of a Horseman: The effect of the Rider's Thighs is one of the Aids that serves to make a Horse work vigorously in the Manage. As soon as the Cavalier closes with his Thighs, you see the Horse is enliven'd and alarm'd, as preparing himself for doing what is demand'd of him, and disposing himself for the Manage. This Horse has such fine Aids, that he manages by the Aids of the Thighs alone, without needing those of the Legs.



*Fore-thigh*, or Arm of a Horse, is that part of the *Fore-leg* that runs between the *Shoulder* and the *Knee*: Tho' the *Fore-thigh* do not bend or bow, yet we commonly say a Horse goes fine, that bends well the *Fore-thigh*; importing thereby, that he bends well his Leg. Your Horse bends the *Fore-thighs* sufficiently, and lifts his *Fore-quarter* very freely, so that there's no occasion to put him any longer between the two Posts; to make him light before.

**T I C K**, is a Habit that some Horses take of pressing their Teeth against the Manger, or all along the Halter or Collar, as if they would bite it. You have got a *Ticker*, that by ticking so often, will fill his Body with Wind, which will gripe him, and make him sick.

**T I C K L I S H**: A Horse is said to be ticklish, that's too tender upon the Spur, and too sensible, that does not freely fly the Spurs, but in some measure resists 'em, throwing himself up when they come near and prick his Skin. A *Ticklish* Horse has somewhat of the *Ramingues*; i. e. the Kickers against the Spurs, but with this difference, that the latter put back, leap and kick and yerk out behind, in disobeying the Spurs; whereas a *Ticklish* Horse only

resists for sometime, and afterwards obeys, and goes much better through the fear of a Vigorous Ham, when he finds the Horse-man stretch his Leg, than he does upon being actually pricked.

**T I M E**, is sometimes taken for the Motion of a Horse that observes Measure and Justness in the Manage; and sometimes it signifies the Interval between two of his Motions. This Horse-man is very attentive to all the Horse's Times, and backs 'em seasonably. Such a Horse-man has slip'd two Times, and suffer'd the *Cadence* of the Horse to be interrupted for want of aiding him. In the Manage of a Step and a Leap, the Horse makes by turns a *Corvet* between two *Caprioles*; and in that case the *Corvet* is one time that prepares the Horse for the *Caprioles*. Make your Horse mark two or three times at this Stop. Here by two or three times, you are to understand, two or three *Falcades*. Since your Horse is so very grave, if you would oblige him to give some *Corvets*, you should put him upon a gentle Gallop, and upon his Haunches, and assist him with your Legs, to make him mark the *Times* of the *Corvets*. In this last Example, the Word *Time* is taken for the Motion.



The Word *Time* does likewise signifie the effect of one of the Aids. This Horse-man prepares and disposes his Horse for the effects of the Heel, in beginning with one *Time* of the Legs; and he never runs precipitantly upon his *Times*.

**TIMOROUS:** Fearful Horse. See *Starting*, *Skit-tish*. In *French*, *Peureux*, *Ombra-geux*.

**TIT T.** See *Nag*.

**TOE**, is the Stay of the Hoof upon the fore-part of the Foot, comprehended between the Quarters. We say commonly, (*Pince devant*, and *talon derriere*) the *Toe* before, and the *Heel* behind; implying, that in Horses, the *Toe* of the Fore-feet is stronger than the *Toe* of the *Hind-feet*: And on the other hand, the *Heels* behind are stronger than those before: And accordingly in shoing, we drive higher into the *Toes* of the *Fore-feet*, and into the *Heels* of the *Hind-feet*. See *Drive*.

And sometimes a Horse does not rest his *Hinder-feet* all equally upon the Shoe, but raises his *Heel*, and goes upon the *Toes* of the *Hind-feet*. Such a Horse is called in *French*, *Rampin*.

**TONGUE:** The aid of the *Tongue* or *Voice* is a sort of agreeable clacking, or a certain Sound form'd by the *Cavalier*, in striking his

*Tongue* against the Roof of his Mouth, when he means to animate the Horse, and sustain him, and make him work well in the Manage. This Horse takes the Aids of the *Tongue* very well, he takes Life and Courage upon the Aids of the *Tongue*.

*Tongue.* A Horse that draws in, or swallows his *Tongue*, is said to do so when he turns it down his Throat, which makes him wheeze as if he were short-winded. This Fault is cured by giving him a Bitt with a Liberty for the *Tongue*. See *Liberty*.

**TORCHENES**, is a Long Stick with a Hole at the end of it, through which we run a Strap of Leather, the two ends of which being tied together, serve to straiten and closely tye up a Horse's Nose as long as the Stick is stay'd upon the Halter or Snaffle. This is done to keep the Horse from being unruly when they go to dress him, or upon any other occasion. In *Germany*, when the Jockeys bring to any Fair the *Rouffins*, *i. e.* thick-bodied strong Stone-Horses, they clap a *Torchenes* upon their Nose, to prevent their being disorderly.

**TRAMELLED:** A Horse is said to be tramed, that has Blazes or White Marks upon the fore and hind-foot of one side, as the far-foot



foot before and behind. He is so call'd from resemblance of the White-foot to the Hoses of a Half-tramel.

*Cross-tramell'd* Horse, is one that has White Marks in two of his Feet that stand cross-ways, like a *St. Andrew's* Cross; as in the Far-fore-foot, and the Near-hind-foot; or in the Near-foot before, and the Far-foot behind.

TRANCHEFILE, is the Cross Chain of a Bridle that runs along the Bit-mouth, from one Branch to the other.

TRAQUENADE. See *Entrepas*.

TRAVERSE; a Horse is said to Traverse, when he cuts his Tread cross-wise, throwing his Croupe to one side, and his Head to another. When you stop your Horse, take care he does not Traverse. When you pull'd your Horse back, he Travers'd; and you do not consider, you ought to put back as straight as you advanc'd.

TRAVICE, (in *French*, *Travail*, and in some of the remoter parts of *England*, a *Break*;) is a small Inclosure, or oblong Quadrangle, plac'd before a Farrier's Shop, and consisting of four Pillars or Posts, kept together by cross Poles; the Inclosure being design'd for

holding and keeping in a Horse that's apt to be unruly or disorderly, in the time of Shoeing, or of any Operation.

TREAD. See *Piste*.

TREPIGNER; A *French* Word, importing the Action of a Horse, who beats the dust with his Fore-feet in Managing, without imbracing the Volt; and who makes his Motions and Times short, and near the ground, without being put upon his Haunches. This is generally the Fault of such Horses as have not their Shoulders supple, and at liberty, and withal have scarce any Motion with them. A Horse may *Trepigner*, in going upon a straight Line.

TRIDE; A Word us'd in the Academies, signifying Short and Swift. A *Tride* Pace, is a Going of Short and Quick Motions, tho' united and easy. This Horse has a *Tride-Career*; that is, he gallops very fast, and has his Times or Motions short and nimble. A Horse is said to work *Tride* upon Volts, when the Times he marks with his Haunches are short and ready. Some apply the Word only to the Motion of the Haunches.

**TRIP**, or *Stumble*; A Horse is said to Trip, when he makes a false Step. Sometimes when a Horse stumbles, the *French* say, *La jambe mollit; His foot slackens*. Since your Horse is weak in the Reins and the Ridge of the Back, and his Feet are worn, he is apt to stumble.

**TROT**, is the Pace or Going of a Horse; in which the Motion is, Two Legs in the Air, and Two upon the Ground cross-wise, or in the form of a *St. Andrew's Cross*; continuing alternately to raise at once the Hind-leg of one side, and Fore-leg of the other; leaving the other Hind and Fore-leg upon the Ground, till the former come down. A Horse puts himself to a Trot, when, upon a Walk, he makes *halte*, or quickens his Pace; and if he be assisted by the Switch, and the Heels, he takes it yet better. This Horse is sure and firm, both at Step, Trot, and Gallop. This Horse Trots freely; and in Trotting, he tosses up his Leg; *i. e.* he bends his Fore-Thighs, and has a good Motion with him. Such a Horse rakes as he Trots, because he is shoulder-splait.

**TROUSSEQUEUE**. See *Saker*, or *Dock*.

**TROUSSEQUIN**, is a piece of Wood, cut Arch-wise, rais'd above the hinder Bow of a great Saddle, which serves to keep the Bolsters firm. There are some *Dutch Saddles*, call'd *Selles Razes*, which have a low *Troussequin*.

**TROUT-COLOUR'D** Horse; is a White, speckled with Spots of Black, Bay, or Sorrel; particularly about the Head, and Neck.

**TRUSS'D**. A Horse is said to be well Truss'd, (in *French*, being *Gigoté*;) when his Thighs are large, and proportion'd to the Roundness of the Croupe. A Horse is said to be ill Truss'd, when his Thighs are thin, and bear no proportion to the Breadth of the Croupe.

**TURN**, is a Word commonly us'd by the Riding-Masters, when they direct their Scholars to change Hands. See *Change*, and *Entier*.

*Turn your Thighs, Turn your Legs, Turn your Heels*. You can never have fine nice Aids, or feel exactly the Motions of your Horse; unless you turn your Thighs, so that the inside of your Knee may touch the Saddle.

**TUSHES**; are the Four Teeth of a Horse; seated



seated beyond the Corner-Teeth, upon the Barrs; where they shoot forth on each side of the Jaws, two above, and two below, about the Age of Three, and Three and a half, and sometimes Four: And no Milk or Foal-Tooth ever comes forth in the place where they grow. See *Teeth*.

**T W I S T**; the Inside, or flat Part of a Man's Thigh; upon which a true Horseman rests upon Horseback.

**T W I S T E D**, (in *French*, *Bistourné*) is a Horse reduc'd to the same State of Impotency with a Gelding, by the violent Wringing or Twisting of his Testicles twice about; which dries them up, and deprives them of Nourishment.

## V.

**V A L E T**, is a Stick, arm'd at one end with a blunted Point of Iron, to prick and aid a Leaping Horse. Formerly, a Valet was call'd *Aiguillon*, (*i. e.* Goad) and some of 'em had Spur-Rowels upon 'em, only the Points beaten down: And when a Horse was first begun round a Pillar, without a Rider,

they us'd to prick his Flanks with the Valet, to make him know the Spur, and obey it without resisting. At present the Valet is not employed for that Use in Manage-Schools; and the Name of *Goad* is suppress'd, as being only proper for Oxen.

**V A U L T** a Shoe, is to forge it hollow, for Horses that have high and round Soles; to the end that the Shoe, thus hollow, may not bear upon the Sole that is then higher than the Hoof. But, after all, this sort of Shoes spoils the Feet; for the Sole being tenderer than the Shoe, assumes the Form of the Shoe, and becomes every day rounder and rounder. In Mr. *Solleysel's* Compleat Horseman, you may see the true Method of Shoeing for high and round Soles.

**V E I N**; to tye and strike a Horse's Vein. See *Barr*.

**V E S S I G O N**, A Wind-Gall, or soft Swelling on the in and outside of a Horse's Hough; that is, both on the right and the left of it.

**V I V E S**, are Glands near the Throat, that sometimes swell, and by their pressure upon the Throat, do so cramp Respiration, that the Horse



Horse is in danger of being stifled.

**UNCERTAIN.** We call a Horse *uncertain*, that is naturally restless and turbulent, and is not confirm'd in the Manage he's put to; so that he works with trouble and uncertainty. See to confirm your Horse in his *Terra à terra*, for he's very *uncertain*.

**UNITE:** A Horse is said to unite, or walk in union; when in galloping, the Hind-quarters follow and keeptime with the Fore. This Horse is united, for his Hind and Fore-quarters make but one Action, without changing the Foot, or galloping false.

**VOLTE:** This Word signifies a Round, or a Circular Tread; and in general, when we say in the Academies, To make *Voltes*, to manage upon *Voltes*, we understand a Gate of two Treads, made by a Horse going sideways round a Center, in such a manner, that these two Treads make parallel Tracts, one larger made by the Fore-feet, and another smaller made by the Hinder-feet, the *Croupe* approaching towards the Center, and the Shoulders bearing outwards. Sometimes the *Volte* is of one Tread; as when a Horse makes *Volts* in *Corvets*, and in *Caprioles*,

so that the *Haunches* follow the Shoulders, and move forward on the same Tread. In general, the Way or Tract of the *Volte* is made sometimes round, sometimes oval, and sometimes a Square of Four straight Lines; so that these Treads, whether round or square, inclose a *Terrain*, or *Manage-ground*, the middle of which is sometimes distinguish'd by a *Pillar*, or else by an *Imaginary Center*, which is there supposed in order to regulate the distances and the justness of the *Volte*.

*Renvers'd Volt* is a Tract of two Treads, made by the Horse, with his Head to the Center, and his *Croupe* out; so that he goes sideways upon a Walk, Trot or Gallop, and traces out a small Circumference with his Shoulders, and a larger one with his *Croupe*. This different Situation of the Shoulders and the *Croupe*, with respect to the Center, gave this *Volte* the Name of *Renversée*, as being opposite in situation to the former. *Renvers'd Voltes* upon a Walk, appease and quiet unruly Horses, if they are made methodically.

The *Six Volts* are made *Terra à Terra*, two to the Right, two to the Left, and two to the Right again; all with one Breath, observing the Ground with the same Cadence, working



ing (*tride*) short and quick, and ready, the Fore-hand in the Air, the Breech upon the Ground, the Head and Tail firm and steady. To do the *Six Volts*, you should have an excellent Horse that's knowing and obedient, and has strength to answer 'em.

To make a Horse work upon the Four Corners of the *Volte*, is to manage him with that justness, that from Quarter to Quarter, or at each of the Corners or Angles of the *Volte*, he makes a narrow *Volt* that does not take above the quarter of the great *Volt*, the Head and Tail firm; and thus pursues all the Quarters, with the same Cadence, without losing one Time or Motion, and with one Reprise, or with one Breath.

In speaking of *Volts*, we say, to put a Horse upon the *Volts*; to make him work upon the *Volts*; to make good *Volts*, to embrace the whole *Volt* well; that is, to manage so, that the Horse working upon *Volts*, takes in all the Ground, and the Shoulders go before the Haunches. To passage upon *Volts*, or ride a Horse Head and Haunches in, is to ride him upon two Treads, upon a Walk, or a Trot.

*Demi-Volt*, is a Demi-round of one Tread or two, made by the Horse at one of the Corners or Angles of the *Volt*, or else at the end of the Line of the

*Passade*; so, that being near the end of this Line, or else one of the Corners of the *Volt*, he changes hands, to return by a Semicircle, to regain the same Line. When he does not return upon this Line, we say, he has not clos'd (*serrè*) his *Demi-Volte*.

*Demi-Volts* of the length of a Horse, are Semicircles of two Treads, which a Horse traces in working sideways, the Haunches low, and the Head high, turning very narrow; so that having form'd a Demi-round, he changes the Hand to make another, which is again follow'd by another change of Hand, and another Demi-round which crosses the first. This *Demi-Volt* of a Horse's length, is a very pretty Manage, but very difficult; we may compare it to a Figure of 8.

*Demi-Volte* of five times, or *Passade* of five Times. See *Passade*.

## W.

**W**ALK, is the slowest, and least rais'd, of a Horse's Goings. The Duke of Newcastle made this Motion to be two Legs diametrically opposite in the Air, and two upon the Ground at the same time, in the Form of a St. Andrew's Cross: Which, in effect,



effect, is the Motion of a Trot. But later Authors agree, that so great a Master was mistaken in this point: For, in a Walk, (as any one may observe) a Horse lifts two Legs of a side, one after the other, beginning with a Hind-leg first: As, if he lead with the Legs of his right side, then the first Foot he lifteth is his far-hind Foot; and in the time he is setting it down, (which in a Step is always short of the Tread of his Fore-foot upon the same side) he lifteth his far Forefoot, and setteth it down before his near Fore-foot. Again, just as he is setting down his far Fore-foot, he lifts his near Hind-foot, and sets it down again just short of his near Fore-foot, and just as he is setting it down, he lifts his near Fore-foot, and sets it down before his far Fore-foot. And this is the true Motion of a Horse's Legs upon a Walk. This Horse walks well; he raises his Legs. Such a Horse observes the Walk, or Step: He finishes the Demivolt in a Walk. Begin this Lesson in a Walk, and end it with a Walk. When you teach your Horse to turn to the right and left, or from one hand to another, make him walk at first, then teach him

upon the Trot, and then upon the Gallop.

**WARRANT** a Horse. A Jockey that sells a Horse, is by an inviolable Custom obliged to Warrant him, that is, to refund the Money that was given for him, and re-deliver the Horse in Nine days after the first Delivery, in case he sold him when under such Infirmities as may 'scape the View of the Buyer, and as are not obviously discovered, namely, Purfiveness, Glanders, and Unsoundness, Hot and Cold. But he does not warrant him clear of such Infirmities as may be seen and discern'd. And not only a Horse-Merchant or Jockey, but Persons of what Quality soever, stand obliged by the Law of Nature, and will be constrain'd to take back the Horse, if he's affected with the Disorders first mention'd, and to repay the Money.

**WART**, is an Excrecence, or Superfluity of Spungy Flesh, that rises in the hinder Pasterns of Coach-Horses, almost as big as a Walnut. A Wart, (in *French*, *Poirau*) suppurates and voids red stinking Matter, and do's not cure but for a time, for it returns again.

**WATERY Sores**, (in *French*, *Mauvaises Eaux*) are a Suppuration of stinking and



and malignant Humors, which issue from the Pasterns and Fetlock-Joynts of a Horse; and that from the hinder, rather than the Fore-legs. See the proper Remedies in Mr. Solleysel's Compleat Horseman.

**W A Y ' D** *Horse*, is one that's already back'd, suppled, and broken, and shews a Disposition to the Manage. Your Horse knows the Bridle, and answers the Spurs; and generally when he's put to it, he presents in such a manner, as shews he's thoroughly Way'd, (*acheminé*.)

**W E A K**, Easy Branch. See *Banquet*, and *Banquet-Line*.

**WHITE-Face**, or Blaze, (in *French*, *Chanfrain blanc*) is a White Mark upon a Horse, descending from the Fore-head almost to the Nose. See *Chanfrin*.

**WHITE-Foot**, (in *French*, *Balzane*) is a White Mark that happens in the Feet of a great many Horses, both before and behind, from the Fetlock to the Coffin. The Horses thus mark'd, are either trammell'd, Cross-trammel'd, or white of all Four. Some Horsemen place an unlucky Fatality in the white of the far Foot behind. See *Chaussé trop haut*, and *Trammel'd*.

**W I N D**: A Horse that

carries in the Wind, is one that tosses his Nose as high as his Ears, and does not carry handsomely. The difference between carrying in the Wind, and beating upon the Hand, is, that a Horse who beats upon the Hand, shakes his Head, and resists the Bridle; but he who carries in the Wind, puts up his Head without shaking, and sometimes beats upon the Hand. The opposite to carrying in the Wind, is arming and carrying low: And even between these two there's a difference. Try if a *Martingal* will bring in your Horse that carries in the Wind.

*Wind*. See *Breath*.

*Wind-gall* is a soft Swelling, occasion'd by over-working, just by the Horse's Fetlock, about as big as half a Pidgeon's Egg, and at first full of Water. A Wind-gall upon the Sinew, that grows hard, makes a Horse halt, and in the end makes him down-right lame. Your long-jointed Horses are apt to be Wind-gall'd, though they work never so little. The Wind-galls that we call *Sinewy*, happen commonly in the Hinder-legs, and nothing but Fire can cure them; nay sometimes Fire it self will not do. See also *Vesfigon*.

**W I T H E R S** is the Juncture of the Shoulder-bones,

bones, at the bottom of the Neck and Mane, towards the upper part of the Shoulders. Your Horse is hurt or wrung in the Withers. Some call this in *French*, *Encrainè*, but improperly.

*Withers* of the Bow of a Saddle. See *Bows*.

*Wither-band*, is a Band or piece of Iron laid underneath a Saddle, about four Fingers above the Withers of the Horse, to keep tight the two pieces of Wood that form the Bow.

*Wither-wrung*: A Horse is said to be wither-wrung, when he has got a Hurt in the Withers; and that sort of Hurts are very hard to cure.

*W O L F's Teeth*, is the excessive height of some of the Grinders, which shoot out Points as they increase in length, and not only prick the Tongue, but hurt the Lips in feeding.

To **W O R K** a Horse, is to exercise him at Pace, Trot, or Gallop, and ride him at the Manage. This Gentleman that has not been in the Academy three Months, works well; he'll prove a good Horseman. Never work a Horse but with judgment. To work in a Square. To work in a Circle. To work upon Volts. To work at the Air of *Corvets*. We do not

work this day; that is, we have no Manage this day.

To work a Horse upon *Volts*, or *Head and Haunches* in, or between two Heels, is to passage him, or make him go sideways upon two parallel Lines.

**W R I S T**; (in *French*, *Poing*); the *Bridle-Wrist* is the *Wrist* of the *Cavalier's* Left-hand. A Horse-man's *Wrist* and his *Elbow* should be equally rais'd, and the *Wrist* should be two or three Fingers above the Pommel of the Saddle. This Horse follows the *Bridle-hand*, he does not refuse it. To ride a Horse from hand to hand; *i. e.* to change hands upon one Tread, you need only to turn your *Wrist* to what side you would have the Horse to turn to, without advancing your hand. If your Horse stops, you must make use of both Legs. See *Hand*.

## Y.

**T O Y E R K** or strike with the Hind-legs (in *French*, *Nouer l' Eguillette*) is said of a leaping Horse when he flings and kicks with his whole Hind-quarters, stretching out the two Hinder-legs near together and even, to their full extent. Your Horse is only



only fit for *Croupades* and *Ballotades*; for since he can't *nouer l' Eguillette*, he'll ne'r be fit for *Caprioles*. A single Yerking is call'd in *French*, *Ruade*.

**YIELD**, or slack the Hand, is to slack the Bridle, and give the Horse head.

Z.

**ZAIN**: A Horse is call'd in *French*, *Zain*, that is of a Dark Colour, neither Gray nor White, and without any White Spot or Mark upon him.

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F I N I S.

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The following is a list of the  
 names of the persons who  
 were present at the meeting  
 held on the 10th day of  
 the month of January, 1900.  
 The names are given in  
 alphabetical order.

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T H E

Gentleman's Dictionary.

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P A R T II.

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Of Military Affairs.

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A D J

A D V

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**A**DJUTANT, or *Aid-Major*, is an Officer appointed as an Assistant to the *Major*, to ease him in his Duty: he receives the Orders every Night from the *Brigade-Major*, which, after he has carried to his *Colonel*, he delivers out to the *Serjeants* assembled in a Ring. If there be Detachments for Convoys, Guards or Parties to be made, he gives the Number each Company must furnish, with the Hour and Place of Rendezvous: he places the Guards, and makes Detachments for what other Guards the Regiment is to furnish. He receives and distributes Ammunition to the Companies, keeps a Roll of the Officers to do them Justice in their Duty: and, by the *Major's* Order,

regulates the Price of Bread, Beer, Meat, &c. to prevent the Meris being imposed on by the *Sutlers*. He must be vigilant and active. Each Regiment of Horse has an *Adjutant*, and a Regiment of Foot has one for each Battalion.

**A D V A N C E - G U A R D**, see *Guard*.

*Advance-Fesse*, is a Moat or Ditch of Water round the *Glacis* or Esplanade of a place to prevent a Surprize; they are not much approved of late; for, being drain'd, they serve as a Trench ready made to the Besiegers. The Works raised by M. *Cochörne*, in the Year 1697, to cover *Brussels* from a second Bombardment, had a dry Moat sunk at the Foot of the *Glacis*, of about 7 or 8 yards over-

A a

A I D

**AID-MAJOR**, see *Adjutant*.

*Aid de Camp* is an Officer employ'd under a *General* to carry his Orders; it is a very honourable Post for a Young Gentleman; he is obliged to a very constant Attendance, to be very well mounted, to be diligent and active. A *Lieutenant-General* is allowed two *Aids de Camp*, and a *Major-General* one.

**ALARM** is a sudden Calling to Arms, upon an Apprehension of Danger from the Enemy; a false *Alarm* is sometimes occasion'd by a fearful or negligent *Centinel*, and sometimes designedly by a diligent Officer, to try the Readiness of the Guards. Both in the late War, and this, the *Piquet-Guard* hath often been called out hastily, to see in what Readiness they were.

*Alarm-Post* is the Ground appointed each Regiment by the *Quarter-Master-General* for them to march to, in case of an *Alarm*; this is never done but upon an Apprehension of being attacked by the Enemy: *Alarm-Post* in a Garrison, is the Place allotted each Regiment to draw up in, upon all Occasions.

**AMBLIGON**, see *Triangle*.

**AMBUSCADE** or *Ambush*, is a Lurking Party in a Wood or other convenient Place to surprize an Enemy, either in their Convoys, Detachments, or Foragers. To discover an *Ambush*, to defeat an *Ambush*, to fall into an *Ambush*, are plain.

**AMMUNITION** implies all sorts of Warlike Stores.

*Ammunition-Bread* is carried along with an Army for the Subsistence of the Troops; each *Soldier* receiving a Loaf of six pound weight every four days.

**ANGLE**, as it is a Geometrical Term, is the meeting of two Lines, so that if prolong'd, they would cut one another. 'Tis either *Right-Lined*, when composed of two streight Lines; *Spherical*, when made of two crooked Lines; or *Mixt*, when composed of a streight and crooked Line: Likewise *Acute*, if under ninety Degrees; *Obtuse* if above ninety; and a *Right Angle*, if exactly ninety Degrees.

*Angle*, as a Term in Fortification, is explain'd in the following Definitions. (1.) *Angle of the Centre*, is that made by two Lines drawn from the Centre to the Extreams of any side of the Polygon. (2.) *Angle of the Polygon*, is the Angle made by the meeting of two sides of the Polygon, and is the same with the *Angle of the Gorge*. (3.) *Angle of the Curtin* or of the *Flank*, is the Angle form'd by the meeting of a Flank and a Curtin. (4.) *Angle of the Shoulder*, is form'd by one Face and one Flank. (5.) *Flanked Angle*, is the meeting of two Faces. (6.) *Angle of the Tenail* or *Flanking Angle*, is composed of the Line of Defence and the Curtin. (7.) *Angle forming the Flank*, is an Angle composed of one Flank and



ing the Enemy, and obliging the Garrison to a greater Duty. They have sometimes been successful, as at the Siege of *Mastricht* by the *French*, where the D. of *Orleans* who commanded a false Attack against *Wick*, did by his Presence and Behaviour, so animate his Men, that after having forced the Palisades, he made himself Master of the Counterscarp, and of a Half Moon.

**A X E S** are very useful in an Army for cutting ways thro' Woods, for cutting Trees to make Bridges, for mending the Ways, and many other uses. Most of the Foreign Regiments of Foot, especially the *Danes*, have six Carpenters with *Felling-Axes* to march at the Head of each Battalion: and in the Artillery the *Carpenters* march with their *Axes* to mend any thing that may break down, and to help the Ways. For *small Axes*, see *Hatchets*.

*Pike-Ax* is a Tool carried by the *Pioneers*, to dig up Ground that is too hard for the Spade; they are of great use for mending the Ways, and in Fortification.

## B

**B A C U L E** is a Gate made like a Pit-fall, with a Counterpoize before the *Corps de Gardes* advanc'd near the Gates, which is supported by two great Stakes.

**B A G G A G E - W A G G O N S** are those in which the Officers and Regiments Baggage is carried; before a March they are

appointed a Rendezvous, and are there marshall'd by the *Waggon-Master-General*, according to the Rank the Regiments have in the Army. On a March they are sometimes ordered to follow their respective Columns of the Army, sometimes to follow the March of the Artillery, and sometimes to make a Column by themselves. The *General's* Baggage is generally first. If the Army march from the Right, the Baggage of that Wing has the Van; if from the Left, the Baggage of the Left has the Van. Each Waggon has a distinguishing Flag to show to what Regiment it belongs.

**B A G O N E T** is a short broad Dagger, formerly with a round Handle, fitted for the bore of a Firelock, to be fixed there after the *Soldier* had fired; but they are now made with Iron Handles and Rings that go over the Muzzle of the Firelock, and are screwed fast; so that the *Soldier* fires with his Bagonet on the Muzzle of his Piece, and is ready to act against Horse. Since this new sort of Bagonets, Pikes are so much out of use, that all the *English* Regiments abroad have laid them aside.

**B A G S**, see *Sand-bags*.

**B A L L**, *Bullet*, or *Shot*. is of Iron or Lead, to be fired out of Cannon, Musquet, or Pistol. Cannon-balls are of different Diameters and Weight, according to the nature of the Piece. An *English* Musquet carries a Ball of six-

teen in a Pound, a Carabine of twenty four, and a Pistol of thirty two in a Pound; I mean Ammunition-Carbines and Pistols.

*Ball, Red-hot ball,* are such as are made hot in a Forge standing near the Gun. The Gun being loaded with Powder and wadded with a green Turf, is spung'd with a wet Sponge, and laid at a small Elevation; that the Ball which is taken out of the Forge with a long Iron Ladle may slide down, the *Gunner* at the same time being ready to Fire: it not only fires combustible Matter, but Floors and Planks.

*Ball, Fire balls* are made of a Composition of Meal-Powder, Sulphur, Saltpetre, Pitch, &c. for Firing Houses that incommode Trenches or advance Posts; and are thrown by *Soldiers*.

**BANDELEERS** are small Cases of Wood covered with Leather, holding the Charge of Powder for a Firelock; each *Musqueteer* carries twelve hanging at a Shoulder Belt, call'd a *Collar of Bandeleers*.

**BAND** of *Pentions*, are a Company of 120 Gentlemen, who receive a yearly Allowance of a 100 *l.* for attending her Majesty on solemn Occasions: They are now commanded by his Grace the Duke of *St. Albans*.

*Bands* are likewise Hoops of Iron used about the Carriage of a Gun, such as the Nave-bands, which are Hoops of Iron binding the Nave at both ends. Bands are the Bands that bind the ends of the Axiltree.

**BANQUETT** is a Term in Fortification, being a Foot Bank of Earth about a foot and a half high, and three foot broad, raised on the Rampart at the Foot of the Parapet, for the *Soldiers* to mount on to fire over.

**BARACK** or *Hutt*, see *Cazern*.

**BARBE**, to fire in *Barbe*, signifies firing over the Parapet, instead of using the Embrasures; the Parapet must not be above three foot and a half high.

**BARM**, *Berm*, or *Foreland*, see *Liziere*.

**BARRELS** are for several uses in the Artillery, as for Powder, Small Shot, Flint, Sulphur, Salt-petre, Rosin, Pitch, Quickmatch, and many other things, see *Casks*.

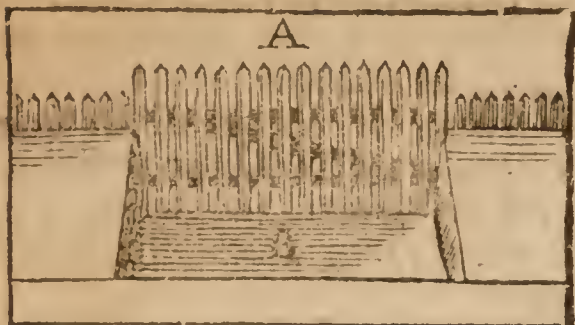
*Barrels, Thundering Barrels* are filled with Bombs, Grenades, and other Fireworks, to be rolled down a Breach. At the Siege of *Namure* in the Year 1695, several *Thundering Barrels* were sent from *Coeborne's* Work down hill upon our Trenches, filled with Hand Grenades; but they had no great Effect, for the *Soldiers* made way for them.

**BARRICADE**, a Term sometimes used for a Fence of *Palisades*.

**BARRIERE** is a Gate made of wooden Bars about five foot long perpendicular to the Horizon *A*, which are kept together by 2 long Bars going across, and another crossing Diagonally



agonally. They are used to stop the Cut that is made through



the Esplanade before the Gate of a Town B.

**B A S E** or *Basis*, is the Foundation of a Work; *Basis* of a Rampart, is where it joins the Ground on which it stands; *Basis* of a Parapet, is where it joins the top of the Rampart.

*Base*, see *Cannon*.

*Base of a Gun*, is the same with the *Breech* of a Gun, and is that solid piece of Metal behind the Chace towards the Cascabel: the great Ring behind the Touch-hole or Vent, is called the *Base Ring*, and the Mouldings behind that, are call'd the *Base* or *Breech Mouldings*.

**B A S K E T S**, small *Baskets*



A, are used in Sieges on the Parapet of the Trench B, being filled with Earth. They are about a foot and half high, about a foot

and a half diameter at top, and 8 or 10 inches at bottom; so that being set together, there is a sort of Embrasures, C, left at their bottoms, through which the *Soldiers* fire without exposing themselves.

**B A S T I O N** is a Mass of Earth raised on the Angles of the Polygon, composed of two Flanks and two Faces, sometimes fac'd with Brick or Stone. Their distance from one another is about 150 *English* yards: They are of several sorts, as *Regular*, when their Faces are of an equal length, their Flanks the same, and the two Angles of the Shoulder equal; or *Irregular*, where that equality is not; or *Deform'd*, where the Irregularity of the Lines and Angles makes the Bastion out of shape. They are *hollow*, when only surrounded with a Rampart and Parapet, leaving the space within void and empty; or *solid*, when the space within them is raised of an equal height with the Rampart of the Place.

*Bastion-Flat* is when the side of the Polygon being double the ordinary length, a Bastion is raised before the middle of the Curtin, which, because its Capital is short, has the flanked Angle very obtuse, which makes the Gorge large, and the Bastion very flat.

*Bastion-detach'd*, is that which is separate or cut off from the Body of the Place, and differs from a Half Moon, whose Rampart and Parapet are lower and not so thick

thick as those of the Place, because it has the same Proportion with the Works of the Place.

*Bastion, Double-Bastion* is a Bastion raised on the Plain of another Bastion, and is sometimes in the nature of a *Cavalier*, see

*Demi-Bastion* is composed of only one Face, one Flank, and one Demigorge.

**BATTALION** is a Body of Foot, generally 700, not including Officers nor Serjeants, armed with Firelocks (Pikes being quite laid aside) Swords and Bagonets, divided into thirteen Companies, one of which is Grenadiers. The first Regiment of *English Guards* has four Battalions; the second Regiment, the Regiment of *Scots Guards*, and the *Royal Scots*, have each two Battalions; the rest of her Majesty's Regiments are but one Battalion each.

**BATTERY** is a Parapet thrown up to cover the *Gunners* and Men employ'd about the Guns, from the Enemies Shot. This Parapet is cut into *Embrasures* for the Cannon to fire through; the height of the *Embrasures* on the inside is about three foot, but they go sloping lower to the outside; their wideness is two or three foot, but open to six or seven on the outside. The Mass of Earth that is betwixt two *Embrasures*, is call'd the *Merlon*. The *Platform* of a Battery is a Floor of Planks and Sleepers to keep the Wheels of the Guns from sinking into the

Earth, and is always made sloping towards the *Embrafure*, both to hinder the *Reverse*, and to facilitate the bringing back of the Gun; see *Platform*.

*Battery of Mortars* differs from a Battery of Guns, for it is sunk into the Ground and has no *Embrasures*; the *Dutch* call this a *Kettle*.

*Battery, Cross-Batteries* are such whose Shot meet at the same place and form an Angle. The Advantage of such Batteries is, that the one beating down what the other shakes, they do good Execution. *Battery d' Enfilade*, is what batters in Flank. *Battery en Echarpe*, is what batters obliquely. *Battery de Reverse*, is what plays upon the Enemies back. *Comrade Batteries*, are those which play upon the same place. To raise a Battery, is the Business of an Engineer. To bring Guns upon Battery, if it be at a Siege, must be in the night time by Men, having Harnels fitted for that use. To ruin a Battery, is to blow it up, or to nail the Guns.

\* *Battery-Master*; his Business is to raise the Batteries; we had such an Officer in the Reduction of *Ireland*, who was paid by the Officer of Ordnance; but that Office is now suppress'd in *England*, though the *Hollanders* have it still.

**BATTLE** is the Engagement betwixt two Armies. To shun a Battel sometimes shows the Conduct and Prudence of a General, as much as getting a Victory. Prince



Prince *Vaudemont's* Retreat from *Aarfele* to *Ghent* with a small Army, in the fight of *Mareschal Villeroy* at the Head of upwards of 80000 Men, that had almost surrounded him in the year 1695, when the King was lying before *Namure*, was one of the greatest Actions done during the late War.

*Battel-Array* is the Order in which an Army is drawn up at a Review, and is more properly call'd the *Line of Battel*.

**B A Y O N E T**, see *Bagonet*.

**B E D** or *Stool of a Mortar*, is a solid piece of Oak in form of a Parallelipiped, bigger or less, according to the nature of the Mortar, hollowed a little in the middle to receive the Breech, and half the Trunions: on the sides of the Bed are fixed the Cheeks or Brackets by four Bolts of Iron, see *Cheeks*.

*Bed of a Gun* is a piece of Plank laid within the Cheeks of the Carriage upon the middle Trunions, for the Breech of the Gun to rest on.

**B E E T L E S** are thick round pieces of Wood of a foot and a half long, and eight or ten inches diameter; having a Handle of about four foot long; the use of them is for beating or rather setting the Earth of a Parapet, or about Palisades, by lifting it up a foot or two, and letting it fall with its own weight; they are likewise call'd *Stampers*, and by *Paviers Rammers*.

**B E R M**, see *Liziere*.

**B I L L S** are a sort of Hand-tools carried along with the Artillery for the use of the Army, for cutting ways through Hedges, &c. and are the same with our Hedge-Bills in *England*.

**B I O V A C** is a Night Guard perform'd by the whole Army, when there is any Apprehension of Danger from the Enemy.

**B L I N D S** are properly every thing that covers the Besiegers from the Enemy, such as Wool-Packs, Fascines, Chandeleers, Mantelets, Gabions, Sand-Bags, Earth-Baskets, &c.

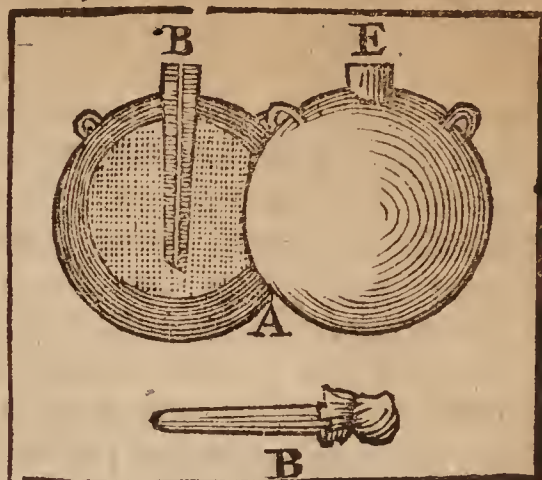
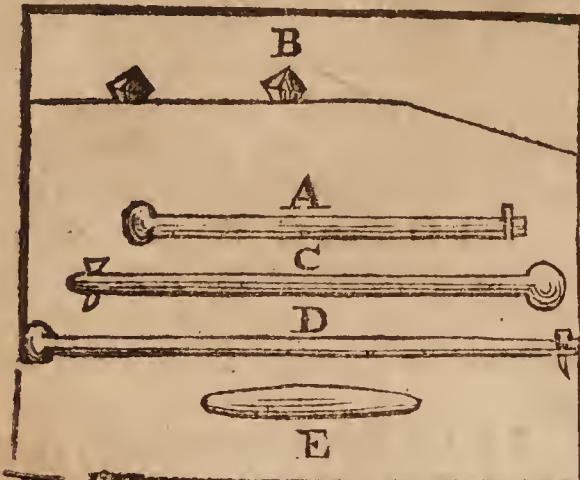
**B L O C K A D E** is the blocking up a Place by posting Troops at all the Avenues leading to it, to keep Supplies of Men or Provisions from getting into it, thereby proposing to starve it out, without making regular Attacks upon it; this is call'd *forming a Blockade*. *To raise a Blockade*, is to force the Troops that keep the Place block'd up from their Posts. *To turn a Siege into a Blockade*, is plain.

**B L U N D E R B U S S** is a short Fire Arm with a large Bore, very wide at the Mouth, carrying several Pistol Balls, proper for the Defence of a Stair-case or Door; the shortest sort of them are call'd *Musquetoons*.

**B O D Y** or *Main-Body* of an Army, are the Troops encamped betwixt the two Wings, and are generally Infantry.

**B O L T S**, as it is a Term in Gunnery, are of several sorts; those that

that go betwixt the Cheeks of a Meal powder ; it takes Fire from



Gun Carriage to strengthen the Transoms, are call'd the *Transum-Bolts A*. The large knobs of Iron on the Cheek of a Carriage which keep the Hand-spike from sliding when it is poising up the Breech of the Peece, are call'd *Prise-Bolts, B*. The two short Bolts that being put one in each end of an *English Mortar Carriage* serve to traverse her, are call'd *Traverse Bolts, E*. The Bolts that go thro' the Cheeks of a Mortar, and by the help of Coins keep her fix'd at the Elevation given her, are call'd *Bracket-Bolts, C*; and the four Bolts that fasten the Brackets or Cheeks of a Mortar to the Bed, are call'd *Bed-Bolts, D*.

**BOMB** is a great Shell of cast Iron, *A*, with a large vent to receive a Fusee. This Fusee, *B* is made of Wood, and drove full of a Composition of Meal, Powder, Sulphur and Saltpetre. When the Bomb is fill'd with Powder, the Fusee is drove into the Vent within an inch of the Head, and pitch'd over to preserve it. When the Bomb is put in the Mortar, the Fusee is uncaped, *E*, and salted with

the flash of the Powder in the Chamber, and burns all the while the Bomb is in the Air; when the Composition is spent, it fires the Powder in the Bomb, which being confin'd, breaks the Bomb with a great Violence, blowing up whatever is about it; for the great height it goes in the Air and the force with which it falls, makes it go deep in the Earth. At the Siege of *Namure* in the year 1695, a Magazine of Hand Grenades, which were brought into a Demi-Bastion between *St. Nicolas Gate* and the River, to be ready against the next Attack for our Lodgment that was upon the Palisades, were blown up by a Bomb from Colonel *Brown's Battery*. The *French, Germans*, and all other Nations, except the *English*, from whom the *Hollanders* have taken it lately, fire the Fusee in the Mortar first, and then fire the Mortar at the Vent, which is a tedious, troublesome, and uncertain way. Bombs are from 50 to 500 pound weight.

*Bombardeers* are those employ'd about a Mortar; they drive the Fusee,



Fusee, fix the Shell, and load and fire the Mortar; they work with the Fireworkers on all sorts of Fireworks, whether for War or Recreation. There is a Chief Bombardeer, and four and twenty Bombardeers establish'd in the Office of Ordnance at a yearly Salary.

*Bomb Ketch* is a small Vessel built and strengthen'd with large Beams, for the use of Mortars at Sea.

**B O N N E T** is a small Work consisting of two Faces, having only a Parapet with two rows of Palisades of about 10 or 12 foot distance; it is generally raised before the Salliant Angle of the Counterscarp, and has a Communication with the Covert way, by a Trench cut through the Glacis and Palisades on each side.

*Bonnet a Pretre*, or *Priests Bonnet*, is a work in Fortification differing from a double Tenail in this, that as the sides of a Tenail are parallel, those of a *Priests Bonnet* would meet if they were prolong'd.

**B O Y A U** or *Branch of a Trench*, is a Line or a particular Trench made parallel to the Defence of the Place, to avoid being flanked or enfiladed. A *Boyau*, when there are two Attacks made upon a Place, serves as a Line of Communication betwixt them; the Parapet of a *Boyau* being still turn'd towards the Place besieg'd, it serves for a Line of Contravallation to hinder Sallies, and defend the Work men.

**B R A C K E T S**, see *Cheeks*.

**B R A N C H** of a Trench, is the same with *Boyau*. *Branch of a Mine*, see *Gallery*.

**B R E A C H** is the Ruin of any part of a Fortification by the Cannon or Mines of the Besiegers, in order to make an Attack upon the Place. To make the Attack the more difficult, the Besieged sow the Breach with Crow-Feet, or stop it with *Chevaux de Frise*.

**B R E A D**, see *Ammunition-Bread*.

**B R E A K** Ground, is the first opening of Trenches against a Place, which is done in the night time, by the Advantage of some rising Ground, hollow Way, or any thing that can cover the Men from the Enemies Fire.

**B R E A S T - W O R K**, see *Parapet*.

**B R E E C H** of Gun, see *Base*.

**B R I D G E** is a conveniency made for passing Rivers, and is of several sorts.

*Bridge of Communication* is a Bridge made over a River, by which two Armies or two Forts which are separate by this River, have a free Communication one with another.

*Draw-Bridges* are made after several Fashions, but the most common are made with Plyers twice the height of the Gate, and a foot diameter; the inner Square is traversed with a *St. Andrew's Cross*, which serves for a Counterpoize, and the Chains which hang from the other Extremities

of the Plyers to lift up or let down the Bridge, are of Iron or Brass. *Floating or Flying Bridges* are made of two small Bridges laid one upon the other, so that the uppermost by the help of Ropes and Pullies is forced forwards, till the end of it join to the place design'd.

*Bridge of Boats*, see *Pontons*.

*Bridge in Gunnery* is a Term given to the two pieces of Timber which go betwixt the two middle Transoms of a Gun Carriage, on which rests the Bed.

**BRIGADE.** An Army is divided into Brigades of Horse, and Brigades of Foot; a Brigade of Horse is a Body of eight or ten Squadrons; a Brigade of Foot consists of four, five or six Battalions, under the Command of a Brigadier; the eldest Brigade has the right of the first Line, and the second the right of the second Line, the two next take the left of the two Lines, and the youngest in the Centre. The Battalions which compose a Brigade observe the same Order.

*Brigadier* is a General Officer who has the command of a Brigade; the eldest *Colonels* are generally advanc'd to this Post, they roll in Duty amongst themselves; he that is upon Duty, is call'd *Brigadier* of the Day; he visits all the Out Guards and Posts of the Army, and at Night takes the Orders from the *Major-General* of the Day, and delivers it to the *Majors* of Brigades, who

must all attend at orderly time. They march at the Head of their Brigades, and are allowed a *Serjeant* and ten Men of their own Brigade for their Guard.

*Brigadeers* and *Sub brigadeers*, are Posts in the Horse Guards.

*Brigade-Major*, is an Officer appointed by the *Brigadier* to assist him in the Business of his Brigade; and acts in his Brigade, the same as a *Major-General* does in the Army. For this Post are chose the most ingenious and expert *Captains*. They are to wait at orderly time, to receive the Word and the Orders which they carry first to their proper *Brigadier*, and afterwards deliver to the *Adjutants* of Regiments at the Head of the Brigade, where they regulate together the Guards, Parties, Detachments and Convoys, and appoint them the hour and place of Rendezvous at the Head of the Brigade, where the *Brigade Major* takes and marches them to the place of the general Rendezvous. He ought to know the State and Condition of the Brigade, and keep a Roll of the *Colonels*, *Lieutenant Colonels*, *Majors* and *Adjutants*. When a Detachment is to be made, the *Major-General* of the Day regulates with the *Brigade-Majors*, how many Men and Officers each Brigade must furnish; and they again with the *Adjutants* of the Regiments, how many each Battalion is to send, which the *Adjutants* divide among the Companies. The Complement each Regiment is to furnish, are taken by the

*Adju-*

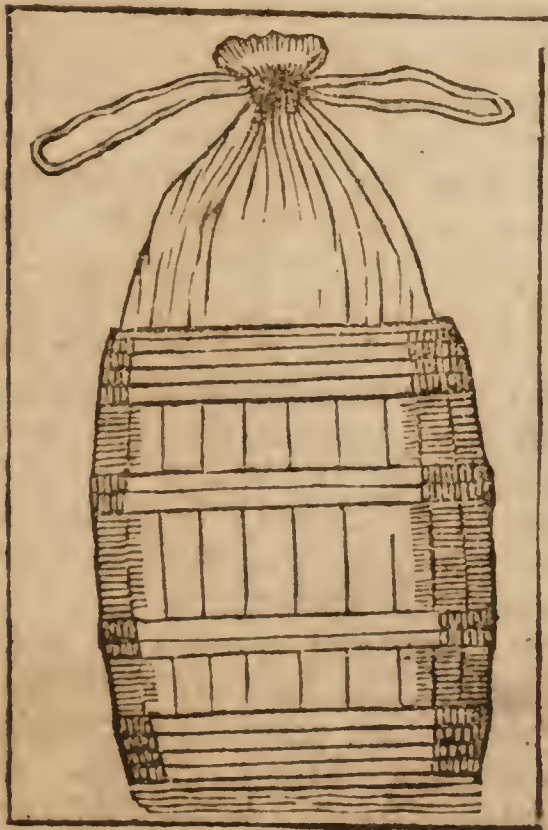


*Adjutant* at the Head of the each Regiment at the hour appointed, who delivers them to the *Brigade-Major* at the Head of the Brigade, who again delivers them to the *Major-General* of the Day, and he remits them to the Officer who is to command the Detachment.

**B R I N G E R S**-UP the whole last Rank of a Battalion being the last Man of each File, are call'd the *Bringers up*.

**B U C K E T S** both of Wood and Leather, are always carried along with the Artillery in the Fire-workers Stores, where they are very useful.

**B U D G E - B A R R E L S** are



small Barrels well hoop'd, with only one head; on the other end is nailed a piece of Leather to draw together upon strings like a Purse. Their use is

for carrying Powder along with a Gun or Mortar, being less dangerous and easier carried than whole Barrels; they are likewise used upon a Battery of Mortars, for holding Meal-Powder.

**B U L L E T S**, all sort of Shot for Fire Arms from a Cannon to a Pistol; those for Cannon are of Iron, the rest of Lead, see *Ball*.

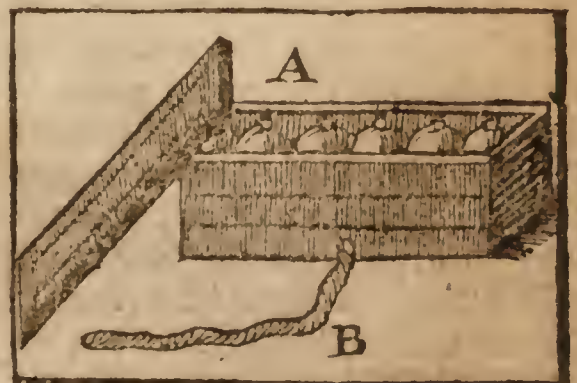
**B U L W A R K** is an old Term for Rampart, see *Rampart*.

C

**C A D E T** is a young Gentleman, who, to attain to some Knowledge in the Art of War, and in expectation of Preferment, chuses at first to carry Arms as a private Man in a Company of Foot. *Cadet* differs from a Volunteer, because he takes Pay, which is no more than a private Man; but a Volunteer serves without Pay.

*Cadet* among the French signifies an Officer, who, in respect of another, is younger in Service.

**C A I S S O N** is a Chest of



Wood holding four or six Bombs, sometimes filled only with

with Powder, and buried by the Besieged under ground, to blow up a Work which the Besiegers are like to be Masters of; as thus, after the Bonnet is blown up by the Mine, they lodge a *Caisson* under its Ruins, and the Enemy being advanc'd to make a Lodgment there, they fire the *Caisson* by the help of a Saucis or Pudding, and blow up that Post a second time.

**CALIBER** is a Term in Gunnery, signifying the diameter or wideness of the Bore of a piece of Ordnance.

*Caliber-Compasses* are Compasses



used by Gunners for taking the Diameters of the several parts of a piece of Ordnance, or of Bombs, Bullets, &c. Their Legs are therefore Circular on an Arch of Brass, whereon is mark'd the Inches and half Inches, to show how far the Points of the Compasses are opened asunder. Some are made for taking the diameter of the Bore of a Gun or Mortar.

**CALTHROPS**, see *Crow-Feet*

**CAMP** is the Ground where an Army pitch their Tents. 'Tis marked by the *Quarter-Master-General*, who appoints every Regiment their Ground. The chief Advantages to be minded in chusing a Camp for an Army, is to have it near Water, in a Country of Forage, and where the *Soldiers* may find Wood for dressing their Victuals; it ought likewise to have a free Communication with Garrisons, from whence it may have a continual supply of Provisions. The *Quarter-Master-General* in chusing the Camp, ought to consider the Advantages of the Ground; such as Hills, rising Grounds, Marshes, Woods, Rivers and Inclosures; if the Camp be near the Enemy, and no River or Marsh to cover it, the Army ought to be Entrench'd. An Army always encamps fronting the Enemy, and generally in two Lines running parallel about 500 yards distance, the Horse and Dragoons on the Wings, and the Foot in the Centre; sometimes a small Body of two, three or four Brigades is encamp'd behind the two Lines, and is call'd the *Body of Reserve*. The Artillery and Bread Waggons are generally encamp'd in the Rear of the two Lines. A Battalion of Foot is allow'd 80 or 100 Paces for its Camp, and 30 or 40 for an Interval, betwixt one Battalion and another. A Squadron of Horse is allowed 30 for its and 30 for an Interval, and more



more if the Ground will allow it. Each Battalion posts a small Guard commanded by a Subaltern Officer, about 100 yards before the Front of the Regiment call'd the *Quarter Guard*, for the security of the Regiment; and each Regiment of Horse mounts a small Guard on Foot in the Front of a Regiment under a *Corporal*, call'd the *Standard Guard*. The Grand Guard of the Army consists of Horse, and is posted a mile and a half from the Camp towards the Enemy, on the Right and Left, by the *Lieutenant* or *Major General* of the Day, who chuses the properest Places, from whence all the Avenues of the Camp may be discover'd. At a Siege the Army encamp with their Rear to the Place besieged. *Flying Camp* is the Ground on which a *Flying Army* are encamp'd.

CAMP AIGN is that part of the Summer betwixt the Armies taking the Field, and their returning to Garrison, which is commonly six or seven months; an Officer or Soldier is said to have made a Campaign that has been in the Field with the Army, and may reckon as many Campaigns as he has been Summers in the Field. The Opening and Close of the Campaign, is the Armies taking the Field, or returning to Garrison.

CANNON is a piece of Ordnance of Brass or Iron, of several sorts and sizes, from a *Cannon Royal* or *Cannon* of eight, which carries a Ball of sixty

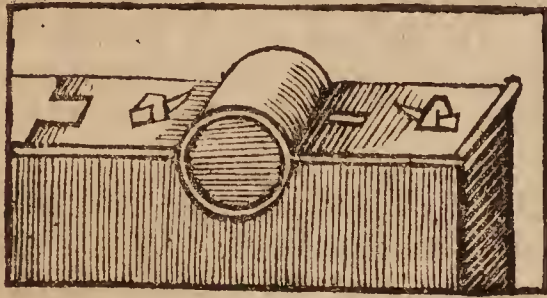
three pound, to a *Base*, which is the lowest Nature of Cannon. Those most used in the Army or Navy, are (1.) *Demi-Cannon*; for the *Cannon Royal* and *Bastard-Cannon* are too large. It carries a Ball of 32 pound, and is used in the lower Tire of a First Rate Man of War. (2.) *Twenty four Ponders*: (3.) *Culverins* carrying 18 pound: these two Natures of Guns are the best for Battering. (4.) *Twelve Ponders*. (5.) *Demi Culverins* carrying 9 pound Ball; these may be likewise used at a Siege. (6.) *Six Ponders*. (7.) *Sakers* carrying five and a quarter pound Ball. (8.) *Minions* of 4 pound, and (9.) *Three Ponders*, which are the lowest Nature of Guns used in the Field or Navy: these six last are properest Field Guns for following an Army. The most remarkable parts about a Gun, are the *Cascabel*, *Mouldings*, *Base-Ring*, *Vent*, *Vent-Ring*, *Reinforc'd-Ring*, *Trunions*, *Dolphins*, *Trunion-Ring*, *Cornish-Ring*, *Neck*, *Mulle*, *Face*, and *Chace*, or *Cylinder*; see each in its proper place. Guns longer than ordinary, are call'd *Slings*, *Drakes*, &c. as those shorter are call'd *Cuts*. The length of a true fortify'd Gun, is about seven diameters of the Metal at the Vent; the diameter of the Metal there being three diameters of the Bore; so that a 24 Pounder being six inches in diameter of her Bore, the thickness of the Metal at the Vent must be a foot and a half, and her length thirteen foot and a half.

*Cannon-Basket*, see *Gabions*.

*Canon-Carriages*, see *Carriages*.

CANVAS-BAGS, see *Sand Bags*.

CAPESQUARE is a



Term in Gunnery given to that strong Plate of Iron which comes over the Trunions of a Gun, and keeps her in her Carriage; it is fasten'd by a Hinge to the Prize-plate, that it may lift up and down; it forms a piece of an Arch in the middle to receive a third part of the Trunions, for two thirds are let into the Carriage; and the other end is fasten'd by two Iron Wedges, which are call'd the *Forelocks* and *Keys*.

CAPITAL is a Term in Fortification, signifying the Line drawn from the Angle of the Gorge to the Flanked Angle. A Bastion is said to have sixty yards of Capital, when there is sixty yards from the Angle of the Gorge to the Point of the Bastion.

CAPITULATIONS are the Articles agreed upon betwixt the Besieged and the Besiegers for surrendering a Place. The *Chamade* being beat, all Hostilities cease on both sides, and the Officer who commands

in the Trenches, goes upon the Breach to hear what the Enemy proposes or would have, if it be to capitulate; the Governour sends Deputies to the General to treat, if the Capitulation be agreed to and sign'd; Hostages are delivered on both sides for the exact Performance of the Articles; one part of the Place is deliver'd to the Besiegers, and a day fixed for the Garrison to march out: The ordinary and most honourable Conditions are, to march out at the Breach, with Arms and Baggage, Drums beating, Colours flying, Match lighted at both ends, Ball in Mouth, with some pieces of Cannon and Waggons, and Convoys for their Baggage and for the Sick and Wounded.

CAPONIERE is a Work sunk on the Glacis of a Place, about four or five foot deep: the Earth that comes out of it serves to form a Parapet of two or three foot high, made with Loop-holes or small Embrasures; it is cover'd overhead with strong Planks, on which are laid Clays or Hurdles which support the Earth that covers all; it holds about 15 or 20 Men, who fire thro' these Embrasures on the Besiegers; the Clays are made sometimes in the bottom of a dry Moat. At the Siege of *Lisle* by the *French* in 1667, the Count *de Broway* Governour for the King of *Spain*, had sunk a *Caponiere* on the Salliant Angle of the Glacis, towards the Attack of



*Piccardy*, which was Palifaded; but was forced by the Count *de St. Paul*, who from thence threw himself into the Covert way, and made a very advantageous Lodgment, which discovered the whole breadth of the opposite Ditch. At the second Siege of *Dole* in 1674, the Besieged had a *Caponiere* in the bottom of the *Fossè*, which could not be ruined by the Batteries. They were much used at the Siege of *Candy*; they differ from *Coffre*; see *Cofre*.

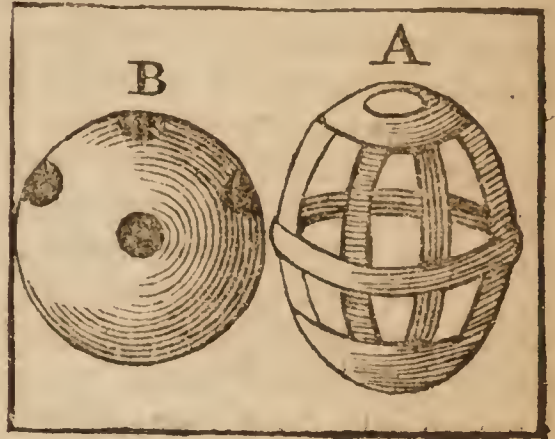
**CAPTAIN** in Field Regiments is he who commands a Troop or Company; he ought to be very diligent and careful to keep his Company full of young lusty Soldiers, to know their Names and Dispositions, and what every Man is capable of; to visit their Tents and Lodgings, to see what is wanting, to pay them well, to cause them to keep themselves clean and neat in their Cloaths, Shoes, Stockings, &c. and to keep their Arms bright: He has Power in his own Company of making Serjeants, Corporals and Ianspesades; he Marches still at the Head of his Company, and Ranks according to the Seniority of his Commission.

*Captain-Lieutenant*, is he who commands the *Colonels* Troop or Company.

**CARABINE** is a Fire Arm shorter than a Firelock, and carries a Ball of 24 in the pound; they are carried by the Light Horse, hanging at a Belt over the Left Shoulder.

**CARABINEERS** are Regiments of Light Horse, carrying longer Carabines than the others, and are used sometimes on Foot; we have none in our Army but in Major-General *Wintham's* Regiment.

**CARCASS, A**, is an



Invention of an oval Form made of ribs of Iron, afterwards filled with a Composition of Meal-Powder, Saltpetre, Sulphur, broken Glass, shavings of Horn, Pitch, Turpentine, Tallow, and Linseed Oil, and then coated over with a pitch'd Cloath; it is primed with Meal-Powder and Quickmatch, and fired out of a Mortar; the Design of it is to set Houses on fire. For lifting it up to put it in the Mortar, it has two small Cords fixed to the sides of it. Another sort there is of them, of a late Invention for the Sea Service, which differ nothing from a Bomb, save its being fill'd with a Composition as before, and having Five holes all primed with Powder and Quickmatch, which takes fire from the flash of the Mortar, and having fired the Composition, it

burns very vehemently from those Holes, *Letter B.*

**CARRIAGE** is a general Term for Waggon, Carts, Litters, &c.

*Carriage of a Cannon* is a long narrow Cart, invented for marching of Cannon, and for the more convenient using them in Action; it is made of two planks of Wood, commonly once and a half the length of the Gun, which are called the Cheeks, and join'd together by three wooden Transoms, strengthen'd with three Bolts of Iron, and call'd the Fore, Middle, and Hind Transoms; it is mounted on two Wheels, but on a march has two fore Wheels, with Shafts or Limbers added. The parts about a Carriage are the Cheeks, the Transoms, the Bolts, the Plates, the Train, the Bands, the Keys and Locks, the Bridge, the Bed, the Hooks, the Trunion Holes and the Capesquare, see *each in its proper place*; see likewise the parts of Wheels and Limbers, at *Wheels and Limbers*.

*Block-Carriage* is a Cart made on purpose for carrying of Mortars and their Beds from one place to another.

*Truck-Carriages* are two short planks of Wood supported on two Axiltrees, having four Trucks or Wheels of solid Wood, about a foot and a half, or two foot diameter, for carrying Mortars or Guns upon Battery, when their own Carriages cannot go; and are drawn by Men.

**CARTOUCH** is a Case

of Wood about three inches thick at bottom, girt round with Marlin, holding about 400 Musquet Balls, besides six or eight Balls of Iron of a pound weight; 'tis fired out of a Hobit, a small sort of Mortar, and is very proper for defending a Pass. A new sort was made last Spring, much better than the former, of a globular Form, and fill'd with Ball of a pound weight; others were then made for the Guns, being of Ball of half or quarter pound weight, according to the Nature of the Gun, tied in form of a Bunch of Grapes on a Tompion of Wood and coated over; these were made in the room of the Partridge Shot formerly used, and exceed them very far, as some of the *French Battalions* experimented to their Cost, at the Battle of *Blenheim* near *Hochstet*.

**CARTRIDGE** is a Case of Pastboard or Parchment, holding the exact Charge of a Fire Arm; those for Musquets, Carabines or Pistols, hold both the Powder and Ball for the Charge.

*Cartridge-Box* is a Case of Wood or turn'd Iron cover'd with Leather, holding a dozen Musquet Cartridges; it is wore upon a Belt, and hangs a little higher than the right Pocket-hole.

**CASCABEL** is the knob of Metal behind the Breech of a Cannon; the diameter of it is the diameter of the Bore of the Piece; the Neck of the Cascabel,



bel, is what joins it to the Breech Mouldings.

CASERNS, see *Cazerns*.

CASKS or *Barrels* are used in the Army for carry Meal to be laid up in Magazines, or along with the Army for baking Bread for the Troops.

CASEMATE, see *Cazemate*.

CAVALIER is a great Mass or Elevation of Earth of different Shapes, some being round, and some long Squares, situate ordinarily in the Gorge of a Bastion, for those which are raised on the Curtin, are rather *Platforms*; they are bordered with a Parapet cut into Embasures for four, six or eight Cannon, according to the Capacity of the Cavalier: They are a double Defence for the Faces of the opposite Bastion; they defend the Fols, break the Besiegers Galleries, command the Traverses in dry Moats, scowr the Salliant Angle of the Counter-scarp, where the Besiegers have their Counter-Batteries, and enfilade the Enemies Trenches, or oblige them to multiply their Parallels; they are likewise very serviceable in defending the Breach and the Rêtrinchments of the Besieged, and can very much incommode the Retrenchments which the Enemy make, being lodg'd in the Bastion.

CAVALRY are the Regiments of Horse which serve in the Army, and may be properly call'd the *Right Arm of the Army*, for the

Success of a Battle often depends on the Cavalry; their frequent Excursions to disturb the Enemy, to intercept their Convoys, and destroying the Country, are no inconsiderable Matters; the Cavalry is divided into Brigades, as the Infantry, and encamps on the Wings of the Army.

CAVIN is a natural Hollow, fit to lodge a Body of Troops: if there happen to be any near a Place besieged, they are of great use to the Besiegers; for, by the help of such a Place, they can open the Trenches, make Places of Arms, or keep Guards of Horse, without being in danger of the Enemies Shot.

CAZEMATE is a certain retired Platform in the Flank of a Bastion, for the Defence of the Moat and Face of the opposite Bastion; there are sometimes three such Platforms one behind another, the uppermost of which is on the Terre-plain of the Bastion, which makes the other two to be called *Places Basses*, or *Low Places*; they are cover'd from the Enemies Batteries by a Work of Earth added to the Angle of the Shoulder, of a circular, or sometimes of a square Form, call'd *Shoulder*, *Oreillon*, or *Epaulment*. At the famous Siege of Candy, the Turks having attack'd it regularly on the Bastions, *Bethleem* and *Panigra*, for sixteen years, after they were Masters of all the Out-Works about the Town, and these two Bastions had suffered the Effect

fect of many Mines ; the Besiegers had made terrible Breaches in both the Faces, but never could lodge themselves, for the Artillery of the Cazemates still ruin'd their Lodgments, and forc'd them to quit that Attack.

**CAZERNS** or *Baracks*, are lodgings built in Garrison Towns for lodging the Garrison ; they are built near the Rampart, or in the wast Places of the Town ; the *Baracks* or *Cazerns* lately built in *Ireland*, are of such conveniency, both for the Army and Country, that they'll perpetuate the Memory of my Lord *Galway*, who was the Projector of them.

**CENTRE** is the middle Point of a Circle ; *Centre of a Battalion*, are the Pikes ; *Centre of an Army*, is the Infantry.

**CENTINEL** is a private Man in a Company of Foot, armed with a Sword, Firelock, Bagonet, Bandleers, and Cartridge-Box.

**CENTRY-BOX** is the same with *Guerritte*, only he one is of Wood, and the other of Stone ; they are upon the flank'd Angles of Bastions, and on the Angles of the Shoulder, and sometimes on the middle of the Curtin, to preserve the Centries from the Weather, see *Guerritte*.

**CESSATION** of *Arms*, is when a Governour of a Place besieged, finding himself reduced to the last Extremity, that he must either surrender or sacrifice himself, his Garri-

son and Inhabitants, to the Mercy of the Enemy, plants a *White Flag* on the Breach, or beats the *Chamade* to capitulate, at which both Parties cease firing, and all other Acts of Hostility ; till the Proposals be either agreed to or rejected.

**CHACE** of a Gun, see *Cylinder*.

**CHAIN** is a Number of Iron or Brass Rings link'd one in another ; an *Engineers Chain* for measuring of Ground, is of a certain number of Links of an equal length ; *Chains* of a Gun are of Iron, and very strong, fixed on the Draught-Hooks, and going along the Shafts of the Limbers to ease them, but they are not used for small Guns.

*Chains of Draw-bridges*, see *Bridge*.

*Chain Shot*, see *Shot*.

**CHAMADE** is a Signal made by beat of Drum for a Conference with the Enemy, when any thing is to be proposed, as a *Cessation of Arms* to bring off the Dead ; or by the Besieged, when they have a mind to deliver up a Place upon Articles of Capitulation ; and then there is a Suspension of Arms, and Hostages deliver'd on both sides.

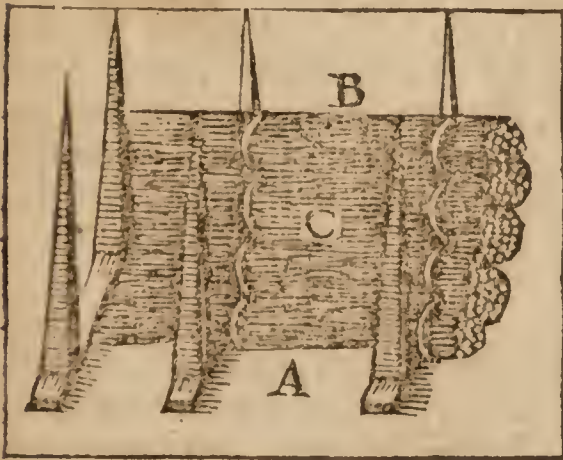
**CHAMBER** of a *Mortar*, (for chamber'd Guns are out of use) is that part of the Chace where the Powder lies, and is much narrower than the rest of the Cylinder ; it is of different Forms ; some are like a reversed Cone or Sugar-Loaf, others globical, with



a Neck for its Communication with the Cylinder, and are called *Bottled Chambers*, but the most ordinary are in Form of a Cylinder. The *Powder Chamber* or *Bomb-Chamber* on a Battery, is a place sunk under Ground for holding the Powder or the Bombs, where they may be out of Danger, and preserv'd from Rain.

*Chamber of a Mine*, is the place in which the Powder is confin'd, and is generally of a cubical Form, see *Mine*.

CHANDELEER is a Frame



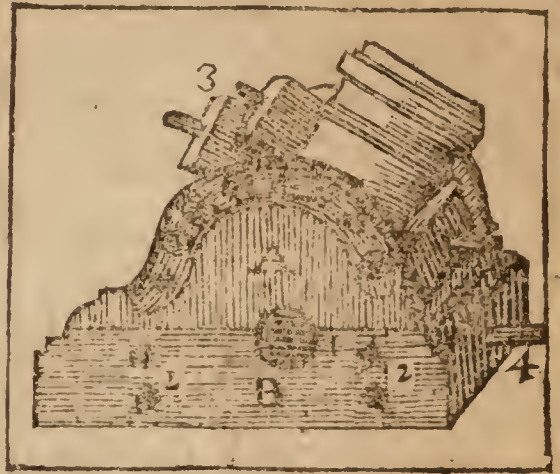
of Wood of two large Planks, 6 or 7 foot asunder, but parallel; on each of which is raised two pieces of Wood perpendicularly, *A, B*, betwixt which are laid Fascines, as *C*, which form a Parapet; they are made to move from Place to Place as occasion requires and serve to cover the Work-men.

CHARG'D-CYLINDER, is that part of the *Chace* of a Gun, where the Powder and Ball are contain'd.

CHAUSSE-TRAPES, see *Crow Feet*.

CHEEKS of a Gun Carriage, see *Carriage*.

*Cheeks of a Mortar, or Bracket*



*kets*, are made of strong Planks of Wood of near a semi-circular Form, bound with thick *Plates* of Iron *A*, and are fixed to the Bed *B*, by four *Bolts*, call'd *Bed Bolts*, as the Figure 2 shows; they rise on each side of the Mortar, and serve to keep her at what Elevation is given her, by the help of strong *Bolts* of Iron as *5*, which go through both *Cheeks*, both under and behind the *Mortar*, betwixt which are drove *Coins* of Wood, as *3*; these *Bolts* are call'd the *Bracket-Bolts*, and the *Bolts* which are put one in each end of the Bed, as *4*, are the *Traverse Bolts*, because with Hand Spikes the Mortar is by these traversed to the Right or Left; the *Trunion* of the *Mortar* is Mark'd 1.

CHESTS and *Baulks*, see *Pontons*.

CHEVAUX DE FRISE, or *Turn-Pikes*, are Spars of Wood about a foot diameter, and ten or twelve long, cut into six

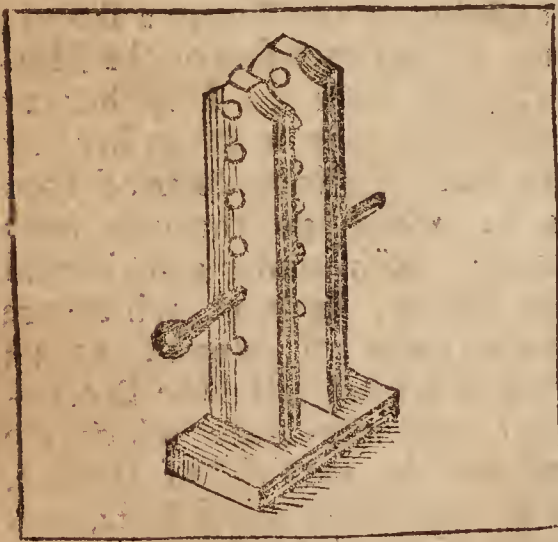


Faces, and bored through; each Hole is arm'd with a short spike



shod with Iron at each end, about an Inch diameter, 6 foot long, and 6 inches distant one from another; so that it points out every way, and is proper for stopping small Overtures, or to be placed in Breaches; they are likewise a very good Defence against Horse.

**CHEVRETTE**; among the



many Inventions for raising of Guns or Mortars into their Carriages, this Engine is very useful; it is made of two pieces of Wood of about 4 foot long, standing upright upon a third which is square; they are about a foot asunder, and parallel; and are pierced with Holes exactly opposite to one an-

other, having a bolt of Iron, which being put through these Holes higher or lower at pleasure, serves with a Hand-spike which takes its poise over this Bolt, to raise any thing by force.

**CIRCLE** is a plain Figure comprehended within a crooked Line, call'd the *Circumference*, which has all its parts equally distant from a certain Point call'd the *Centre*.

*Arch of a Circle* is an undetermined part of the circumference of a *Circle*, being sometimes larger and sometimes smaller.

**CIRCUMVALLATION** is a Trench with a Parapet thrown up by the Besiegers round their *Camp*, when they are in any apprehension of the Enemies attempting to relieve the Place, or raise the Siege. The Engineers having made a Plan of the Country about, and marked all the Hills, Marshes, Valleys, Rivers and Churches, and every thing which may serve to lodge or cover Horse or Foot, as Vineyards, Hedges, Ruins of Houses, &c. and agreed which way to run their Line to the best Advantage, shunning always the Foot of rising Grounds, which the Enemy being Masters of, may command within the Trenches; they mark it out with Picquets and Ropes, making the Foss about 12 foot wide, and the Base of the Parapet eight, the height of the Parapet on the inside being six foot, and on the outside 5, with a Banquet of three foot wide, and one and a half high. The *Lines of*



*Contrevallation* ought to have the same height and breadth, and both the one and the other ought to be strengthened with Forts and Redoubts, and well flanked.

**CITTADEL** is a Place fortified with 4, 5, or 6 *Bastions* commanding a Town, built by Orders of the Sovereign; its being fortified with *Bastions*, distinguishes it from a *Castle*, which hath only round or square Towers. They are sometimes built half within and half without the Rampart of the Town, to the end the Governour of the *Cittadel* may be Master of an Entry into the Town, and likewise to the Country, without having a Dependence on the Inhabitants. Others are built without the Town, but that must be upon pressing Reasons, such as keeping Possession of a high Ground which the Besiegers might make use of, either to batter the Town, or to cover their Camp, or to preserve Marshes or Springs of Water, which may be useful to the Inhabitants, because their chief Design is to keep the Inhabitants in subjection, and to hinder their corresponding with the Enemy, which cannot be done, if built at a distance from the Town.

**CLAYES**, see *Hurdles*.

**CLOUTS**, are thin Plates of Iron nailed on that part of the Axle-tree of a Gun-Carriage that comes through the Nave, through which the Linspin goes.

**CLOY Guns**, see to *Nail*.

**COFFER** is a work sunk in

the bottom of a dry Moat, about 6 or 7 foot wide, the length of it being from one side of the Moat to the other, with a Parapet of about two foot high, full of Loop-holes, cover'd over-head with Joysts, Hurdles and Earth; they serve to fire on the Besiegers, when they endeavour to pass the Moat, and differ from the Caponiere, because it is longer, for the Caponiere takes not the whole breadth of the Moat; it differs likewise from the Traverse and the Gallery, because it is made by the Besieged, and these by the Besiegers.

**COLONEL**, is the *Commander in Chief* of a Regiment, whether Horse, Foot or Dragoons, and ought to be a Person of Authority, to assume an absolute Command, to see that the Companies of his Regiment be full, and kept in good Order, that they be duly exercised, and well payed; he may lay any Officer of his Regiment in Arrest, but must acquaint the *General* with it. A *Colonel* is not allowed a Guard, but only a Centry from the Quarter Guard.

**COLOURS** are large Flags of Silk fixt on half Pikes, and carry'd by the Ensigns; when a Battalion is encamped, they are stuck before the Front of the Battalion, but if the Battalion be in Garrison, they are lodged with the *Colonel* or commanding Officer; they are never carried on Detachments, nor with the Battalion when it mounts the Trenches. *Field Colours* are

small Flags of about a foot and a half square, which are carried along with the *Quarter-Master-General* for marking out the Ground for the Squadrons and Battalions.

*Colour-Guard*, see *Guard*.

**COLUMN** of an Army on a march, is a long row of Troops or Baggage following one another; the first and second Lines of the Army, as they are encamped, make generally two *Columns* on a March, filing off either from the Right or Left; sometimes the Army marches in four, six, or eight *Columns*, according as the Ground will allow, and each *Column* is led by a *General Officer*.

**COMMANDING Ground** is an Eminence or Rising Ground, overlooking a Post.

**COMMISSARY** of the *Musters*, is an Officer appointed to Muster the Army as often as the *General* pleases, to know the Strength of each Regiment, and of each Company, to receive and inspect the Muster Rolls, and to keep an exact State of the strength of the Army.

*Commissary of Stores*, is an Officer in the Artillery, who has the charge of all the Stores, for which he is accountable to the Office of Ordnance; he is allowed an Assistant, *Clerks* and *Conductors* under him.

*Commissary of Horses*, is likewise an Officer in the Artillery, appointed to have the Inspection of the Artillery Horses, to see them muster'd, and to send such Or-

ders as he receives from the commanding Officer of the Artillery, by some of the *Conductors* of Horses, of which he has a certain number for his Assistants.

*Commissary of Provisions*, is he who has the Inspection of the Bread and Provisions of the Army.

**COMMISSION** is the Authority from a *Prince* or his *General*, by which an Officer officiates in his Post.

**COMMUNICATION**, *Lines of Communication*, are Trenches made to preserve a safe correspondence betwixt two Forts or Posts, or at a Siege betwixt two Approaches, that they may relieve one another upon occasion, it is the same with *Boyaux*.

*Bridge of Communication*, see *Bridge*.

**COMPANY** is a small Body of Foot commanded by a *Captain*, who has under him a *Lieutenant* and *Ensign*; it consists commonly of 50 *Centinels*, 3 *Serjeants*, 3 *Corporals*, and 2 *Drums*. A *Company* in the Guards is of 80 Private Men. A Battalion of Foot consists of 13 *Companies*, one of which is always Grenadiers: The Eldest *Company* take their Post next the Grenadiers, who have always the Right of the Battalion, and the Second *Company* the Left; the youngest has its Post always in the Centre.

**COMPLEMENT** of a *Cur-tin*, is that part of it which makes the Demigorge

*Complement of the Line of Defence*.



*sence*, is the remainder of the *Line of Defence*, after the Angle of the Flank is taken off.

**COMPTROLLER** of the *Artillery*, is a Post of great Trust; he inspects the *Musters* of the *Artillery*, makes the *Pay-List*, takes the *Accompts* and *Remains* of *Stores*, and is accountable to the *Office of Ordnance*.

**CONDUCTORS** are *Affistants* given to the *Commissary* of the *Stores*, to receive or deliver out *Stores* to the *Army*, to attend at the *Magazines* by turns, when in *Garrison*, and to look after the *Ammunition-Waggon*s in the *Field*; they bring their *Accounts* every night to the *Commissary*, and are immediately under his *Command*.

**CONE** is a *Body* made by the turning of a *Right angled Triangle* round a *Circle*, the angular *Point* of the *Right Angle* being fixed in the *Centre*, which forms a *Pyramid*, whose *Basis* is a *Circle*.

**CONTREBALLATION**, is a *Trench* with a *Parapet* made by the *Besiegers*, betwixt them and the *Place besieged*, to secure them from the *Sallies* of the *Garrison*, so that the *Troops* which form the *Siege* are encamp'd betwixt the *Lines of Circumvallation* and *Contrevallation*; when the *Enemy* has no *Army* in the *Field*, there is no occasion for the *Lines of Circumvallation*; and when the *Garrison* is weak, the *Lines of Contrevallation* are seldom used; at the last *Siege of Landau* we used neither;

but when the *French* besieged it in 1703, they raised *Lines of Circumvallation* and *Contrevallation* very strong, and of a large circuit.

**CONTRIBUTION**, is an *Imposition* or *Tax* paid by *Frontier Countries*, to redeem themselves from being plundered and destroy'd by the *Enemy*.

**CONVERSION**, is a *Military Motion*, which turns the *Front* of a *Battalion* where the *Flank* was, if the *Battalion* be attacked in the *Flank*; and as in *Action* this may often happen, it must be a very useful and necessary *Motion*.

**CONVOY** is a *Supply* of *Men*, *Money*, *Ammunition* or *Provisions*, convey'd into a *Town* or to an *Army*. The *Body* of *Men* that guard this *Supply*, are called likewise the *Convoy*.

**CORDON** is a *Stone* jutting out betwixt the *Rampart* and the *Basis* of the *Parapet*, like the *Thore* of a *Pillar*; it goes quite round the *Fortification*.

**CORIDOR** is a *French Term* for *Covert Way*.

**CORNET**, is the third *Commission Officer* in a *Troop* of *Horse* or *Dragoons*; it is a very honourable *Post*; he commands in the *Lieutenants* absence; his principal *Duty* is to carry the *Standard* near the middle of the first *Rank* of the *Squadron*, and should rather die than lose it, for it is a great *Dishonour* for a *Squadron* to lose their *Standard* to the *Enemy*.

**CORNISH-RING**, or *Astragal* of a Gun, is that small Ring near the Muzzle.

**CORPORAL** is an *Inferior Officer* under a *Serjeant* in a *Company of Foot*; he is commonly an old *Soldier*; he receives the Word from the Rounds that pass by the Grand Guard; he receives likewise the Word from such as are stoppt by his *Centries*, with his Sword drawn; he relieves the *Centries*; and when the Guard is relieved, he gives the Orders he had to the *Corporal* that is to mount, and shows him all the Posts; he carries a Fufee.

**CORPS DE GARDE**, see *Guard*.

**COVERT WAY**, is a space of Ground level with the Country, about 3 or 4 Fathoms wide, cover'd by a *Parapet* which goes quite round the Place; the greatest Effort in Sieges, is to make a Lodgment on the *Covert Way*, which the Besieged generally Palisade and Undermine: this *Parapet* slopes insensibly towards the *Campaign*, and the *Talus* or Sloping, is called the *Glacis*, which the Besiegers are generally oblig'd to sap through to make a Lodgment. The *Parapet* of the *Covert-Way* is about six foot high with a *Panquet*, and forms a *Salliant Angle*, before the *Cur-tin*, which serves for a place of Arms.

**COUNCIL OF WAR**, is when the *General* of an Army calls together his *Lieutenant* and *Major-Generals* for their Advice

upon some Business of Importance; he hears all their Reasons, and having balanced, and considered them judiciously, with regard to the Interest of his Prince and Honour of his Country, without being byas'd by one or another Opinion, he determines to the greatest number of Votes.

**COUNTER-APPROACHES** are the Lines and Trenches made by the Besieged, in order to attack the Works of the Besiegers, or to hinder their Approaches. *Counter-Battery* is a Battery raised to play upon another to dismount the Guns.

*Counter Guard* is a Work raised before the Point of a Bastion, consisting of two long Faces, parallel to the Faces of the Bastion, making a *Salliant Angle*; they are sometimes of other Shapes, and otherwise situated.

*Counter march*, is an Armies turning suddenly their March the contrary way; which may be occasion'd by the Enemies endeavouring to get betwixt them and their Garrisons, or may be done to disappoint and amuse the Enemy. A Battalion is said to *Counter-march*, when being charged in the Rear, they change the Front by marching those which are in the Front, or the *File-Leaders* to the Rear, in place of the *Bringers Up*. Ranks are said to *Countermarch*, when the Wings of a Battalion interchange Ground.

*Counter-mine* is used when the



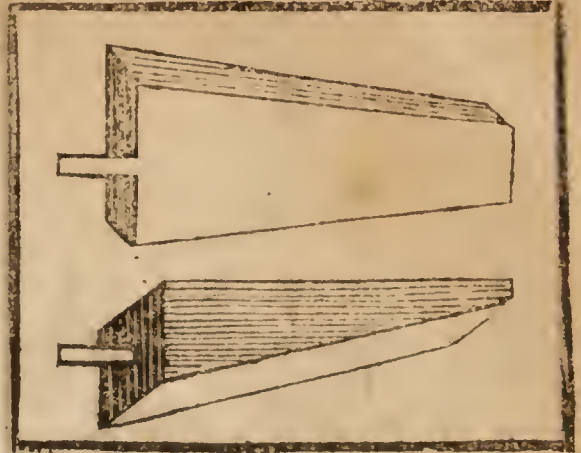
Besiegers have, notwithstanding the Opposition of the Besieged, passed the Foss, and put the Miner to the Foot of the Rampart : They are of two sorts, being either made when the Bastion is raised, or afterwards when it is attacked. Those that are made when the Bastion is raised, are carried quite round the Faces of a Bastion ; their height is from 4 to 5 foot, and broad enough for a Man to pass easily. The others, which are made in time of Necessity, when the Besiegers are undermining a Bastion, are Pits sunk deep in the Ground where the Miner is supposed to be, from whence they run out Branches in search of the Enemy's Mine, to frustrate the Effect of it, by either taking away the Powder, or cutting the Train.

*Counterscarp* is properly the exterior Talus or Slope of the Ditch, but it is often taken for the *Covert Way* and the *Glacis*. The Enemy in this sense are said to have attack'd the Counterscarp, or lodged themselves on the Counterscarp.

*Counter Trenches*, see *Counter-Approaches*.

COURT-MARTIAL is called by a *General* to try Offenders ; it is composed of a *President* named by the *General*, and of 12 *Members* and a *Judge Advocate*, who take an Oath to do Justice according to their Knowledge ; the Sentence is, after being approved by the *General*, put in Execution by the *Provost-Marshal* of the Army.

COINS are wedges of Wood



used under the Breech of a Gun, by which a *Gunner* raises or falls the Muzzle of his Piece, till he point it exactly at the Object : Each Gun has three Coins belonging to her. They are for the same use about a Mortar, see their Shape in the *Figure*.

C R A B, see *Gin*.

C R I C, see *Fack*.

CROWN-WORK is the largest of all Out-Works, and encompasses the most ground, having a very large Gorge, generally the length of the Curtin of the Place, and two long sides, terminating toward the Campaign in two Demi-bastions, each of which is join'd by a particular Curtin, to a whole Bastion, which is the Head of the Work ; these Works are always raised to inclose a rising Ground, or to cover the Head of a Retrenchment, see the *Plan* at the Beginning.

CROW-FEET, *Chausse-Traps*, or *Caltrops*, are Machines of Iron, having four Points of about 3 or 4 inches long, so made that which ever

ever way they fall, there is still a



Point up; they are to be thrown upon Breaches, or in Passes where Cavalry are to march, to whom they are very troublesome, by running into the Horses feet and laming them, see the *Figure*.

CUBE is a Geometrical Figure, being a solid Body bounded by six Squares, like a Die. *Cubical*, as a Cubical Foot or a Cubical Inch, is, when the sides of the Squares that make the Cube are a foot or an inch long.

CUIRASSIERS are Cavalry armed with Back, Breast, and Head-Piece, as most of the *Germans* are; we have had no *Cuirassers* in the *English* Army, since the last Revolution.

CULVERIN is a Cannon about 5 inches and a quarter diameter of the Bore, and from 9 to 12 foot long, carrying a Ball of 18 pound; it is a good battering Gun, but is too heavy for a Field-Piece.

CURTIN is that part of the Rampart of a Place which is betwixt the Flanks of two Bastions, and is the best defended

of any part of the Rampart, wherefore Besiegers never make their Attacks on the Curtins, but on the Faces of the Bastions, because of their being defended but by one Flank.

CUNETTE or *Cuvette* is a deep Trench about three or four fathom wide, sunk along the middle of a dry Moat, to make the Passage more difficult to the Enemy; it is generally sunk so deep till they find Water to fill it, and is good to prevent the Besiegers Mining.

CYLINDER or *Chace* of a Gun is the Bore or Concavity of a Piece, whereof that part which receives the Powder and Ball, is called the *Charged Cylinder*, and that which remains empty after the Gun is charged, is called the *Vacant Cylinder*.

## D

DECAGON is a Figure of ten Sides or Polygons, forming ten Angles, each of which may be fortify'd with a Bastion.

DECAMP is the breaking up from a Place where the Army has been encamped, to march to another.

DEFENCE of a Place, are the parts of a Wall or Rampart which flank and defend the rest, as the Flanks, Cazemates, Parapets, and Faussebrays. The Face of a Bastion, tho it has the simplest Defence of any part of the Fortification, yet it cannot be stormed, till the opposite Flank be ruined.



ined. To be in a posture of Defence, is to be in a Condition to resist or oppose an Enemy.

*Defence, Line of Defence, see Line.*

DEFILE is a narrow Pass which obliges an Army to file off; it is one of the greatest Obstacles that can occur in the March of an Army, especially if it happen to be betwixt Woods or Marshes, for it not only gives an Enemy an extraordinary Advantage of either attacking the Front or Rear, since they cannot come to relieve one another, because of the straightness of the Passage, but it likewise very much impedes the March of an Army. A Retreating Army puts always a Defile betwixt them and the Enemy to secure their Retreat, as the Confederate Army of the Emperour, Spain and Holland, after the Battle of Senef in the year 1673, being at the Siege of Oudenard, and hearing that the Prince of Conde was advancing, they raised the Siege, and defended a Defile which happened in the March of that Prince, so that he could not without a considerable Disadvantage, hinder their saving themselves under the Cannon of Ghent.

To Defile, is to reduce an Army to a small Front, to march thro' such a narrow Passage.

DEGREE is properly a Term in Geometry, often used in Fortification, to measure the Angles, being the 360th part of the Circumference of a Circle; a Degree is subdivided into 60 equal Parts,

called Minutes, and each Minute into 60 Seconds.

DEMI-BASTION, see Bastion

*Demi-Cannon* is a Gun carrying a Ball of 32 pound weight, the diameter of its Bore is 6 inches and a half, and its length from 12 to 14 foot: they are seldom used at Sieges, because of their extraordinary Charge.

*Demi-Circle* is the half of a Circle, cut by a Line passing through the Centre, called the Diameter.

*Demi-Culverin* is a Cannon of about 9 foot long, the diameter of the Bore is 4 inches and a quarter carrying a Ball of 9 pound weight; it is a very good Field Piece, takes 13 Horses to draw it, and two Gunners and 4 Matrosses to serve it.

*Demi-Gorge* is that part of the Polygon which remains after the Flank is raised, and goes from the Curtin to the Angle of the Polygon, It is half of the vacant Space or Entrance into a Bastion.

DESCENT into a Moat is a deep Trench or Sap thro' the Esplanade, and under the Covert way, cover'd over-head with Planks and Hurdles, and loaded with Earth against Artificial Fires, to secure the Descent, which in Ditches that are full of Water is made to the brink of the Water, but in dry Moats the Sap is carried to the bottom of the Moat, where Traverses are made to lodge and cover the Besiegers.

DESERTER is a Soldier, who,

who, by running away from his Regiment or Company, abandons the Service; he is by the Articles of War punishable by Death, and after Conviction, is hang'd at the Head of the Regiment he formerly belong'd to, with his Crime writ on his Breast, and suffered to hang till the Army leave that Camp, to terrifie others.

*Detachment* is a certain number of Officers or Soldiers drawn out from several Regiments or Companies equally, to be employ'd as the *General* pleases, whether on an Attack at a Siege, or in Parties to scowr the Country. A Detachment of 2 or 3000 Men, is a Command for a *Brigadeer*, 800 for a *Colonel*, 4 or 500 for a *Lieutenant Colonel*; a *Captain* never marches on a Detachment with less than 50 Men, a *Lieutenant*, and an *Ensign*, and two *Serjeants*; a *Lieutenant* is allowed 30 and a *Serjeant*; an *Ensign* 20 and a *Serjeant*; and a *Serjeant* 10 or 12 Men. *Detachments* are sometimes made of entire Squadrons and Battalions.

**DIAMETER** of a *Circle*, is a Right Line which passes thro' the *Centre* and touches the *Circumference* in two Points, dividing the *Circle* into two equal parts.

**DISMOUNT** the Enemies *Cannon*, is to break their *Carriages*, their *Wheels*, *Axiltrees*, or any thing else so as to render them inserviceable.

*Dismount*, is likewise a Com-

mand to the *Dragoons* to alight or unhorse.

**DISPART** of a *Gun*, is the difference in the thickness of Metal between the *Base* and *Muzzle Ring*, and is found thus; take with a pair of *Caliber-Compasses* the diameter of these two Rings; suppose of an *English Demiculverin*, the diameter of the *Base* may be about 14 inches, and that of the *Muzzle* about 11; the difference then is three, half of which is one and a half, which is the difference of the thickness of Metal at these two places: The *Dispart* is a piece of Stick of this length, set on the *Muzzle Ring*, which makes a Visual Ray or Line drawn from the *Base Ring* to the top of this Stick, an exact parallel to the *Axis* of the *Concave Cylinder*, or to the *Soul* of the Piece, and serves to direct the *Gunner's Eye* in levelling his Gun at an Object.

**DITCH**, see *Moat*.

**DIVISIONS** of a *Battalion* are the several Parcels into which a *Battalion* is divided in marching; the *Lieutenants* and *Ensigns* march before the *Divisions*.

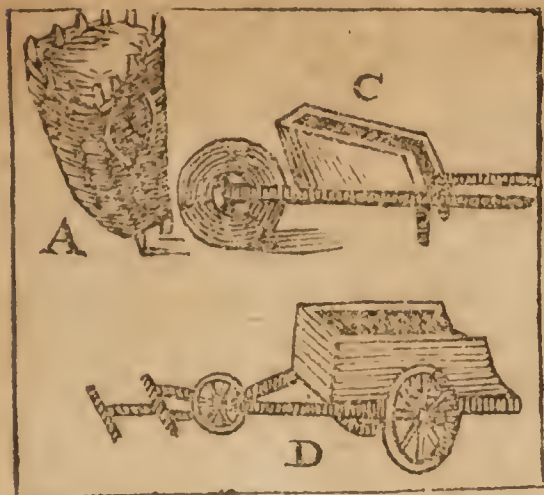
The *Divisions* of an *Army*, are the *Brigades*.

**DODECAGON**, is a Figure bounded by twelve Sides, forming as many *Angles*, capable of being fortified with the same number of *Bastions*.

**DONJON**, is a Place of Retreat, to capitulate with more Advantage, in case of Necessity.



DOSSER, is a sort of Ba-



sket, shaped as the *Figure A* shows, to be carried on the Shoulders, and is used in carrying the Overplus Earth from one part of a *Fortification* to another, where it is wanted. There are likewise small *Carts* and *Wheel-barrows* for the same use, as *D. C.*

DOUBLE-TENAILLE, see *Tenaille*.

*Double*; to *Double*, is a Word of Command, as *Double your Ranks*, or *Double your Files*; *doubling of the Ranks*, is when the second, fourth, and sixth *Ranks* march into the first, third and fifth, so that the six *Ranks* are reduced to three, and the *Intervals* betwixt the *Ranks* become double what they were before; but, *to double by half Files*, is when the fourth, fifth and sixth *Ranks* march up to double the first, second and third, or the contrary. *To double the Files to the Right*, is when every other *File* faces to the Right, and marches into the next *File* to it; so that the six *Ranks* are turned into 12, and each *File* is 12 deep. *To double*

*the Files to the Left*, is when every other *File* faces to the Left, and marches into the next; in doubling the *Files*, the distance betwixt the *Files* becomes double.

DRAGOON, is a Musqueteer mounted on Horse-back, fighting sometimes on Foot, and sometimes on Horse-back, according as Occasion requires: they are divided into *Brigades*, as the *Cavalry*, and each Regiment into *Troops*, each *Troop* having a *Captain*, *Lieutenant*, *Cornet*, *Quarter-Master*, 2 *Serjeants*, 3 *Corporals*, and 2 *Drums*, some Regiments have *Hautboyes*; they are very useful on any Expedition that requires *Dispatch*, for they can keep pace with the *Cavalry*, and do the Duty of *Infantry*. They encamp generally on the Wings of the Army, or at the *Passes* leading to the Camp, and sometimes they are brought to cover the *Generals Quarters*; they do Duty on the *Generals* of Horse and Dragoons, and march in the Front and Rear of the Army.

DRAW-BRIDGE, see *Bridge*.

DRAUGHT-HOOKS, are large *Hooks* of Iron, fixt on the *Cheeks* of a *Cannon-Carriage*, two on each side, one near the *Trunion-Hole*, and the other at the *Train*, and are called the fore and hind *Draught Hooks*. Large Guns have *Draught Hooks* near the middle *Transum*, to which are fixt the *Chains* which serve to ease the *Shafts* of the *Limbers* on a march. The fore and hind *Hooks* are used for

for drawing a Gun backwards or forwards by Men, with strong Ropes called *Draught-Ropes*, fixt to these *Hooks*.

**DREIN**, is a Trench made to draw the Water out of a Moat, which is afterwards filled with Hurdles and Earth, or with Fascines or Bundles of Rushes and Planks, to facilitate the Passage over the Mud.

**DRUM**, is a martial Instrument used by the *Foot* and *Dragoons*, in form of a *Cylinder*, hollow within and cover'd at the two ends with Vellum, which is stretch'd or slackned at pleasure by the means of small Cords and sliding Knots: some are made of Brass, but they are commonly of Wood. The *Drum-sticks* are made of hard firm Wood, about 15 or 18 Inches long, tapering towards the point, where there is a small Knob, which by beating against the *Drum-head* makes the Sound, which is different as the several Occasions require: As *To beat the General*, is a signal for the Army to make ready to march; *The Assembly* is the next Beat, which is an Order for the Soldiers to repair to their *Colours*; and *the March*, is to command them to move. *To beat the Retreat*, is for the Army to keep to their Tents, and not to fire till next morning, for fear of alarming the Camp; this

is about Sun-set, at the firing of a Gun call'd the *Warning-piece*, after which the *Centries* challenge, and the *Picquet-Guard* is relieved. *The Reveille* is beat at break of day, to warn the Soldiers to rife, and the *Centries* to forbear challenging. *The Alarm* is to call the Soldiers to Arms on notice of some sudden Danger. *To beat a Parley* or *Chamade*, is to desire a conference with the Enemy. *To beat a Call*, is to advertise the Soldiers to stand to their Arms, when a *General Officer* is passing by. See *Kettle Drum*.

**DRUMMER**, is he that beats the *Drum*; each Company of Foot has two *Drummers*; and a Battalion has a *Drum-Major*, who has the command over the other *Drums*. They are distinguish'd from the Soldiers by Cloaths of a different fashion, generally laced with a Worsted Livery-lace; their Post, when a Battalion is drawn up, is on the Flanks; and on a March it is betwixt the Divisions.

**DUTY**, is the exercise of those Functions that belong to a Soldier; with this distinction, that *Mounting Guards* and the like, where there is not an Enemy directly to be engaged, is called *Duty*; but their marching to meet and fight an Enemy is called *Going upon Service*.



## E.

EARTH-BAGS, see *Sand-Bags*.

ECHARPE, *To batter en Echarpe*, is to batter obliquely or side-ways. The *Flanks* of Count *Pagan's* construction may be batter'd *en echarpe*, because the *Angles* of the *Curtin* being so obtuse are too much discover'd.

*Echaugette*, see *Guerritte*.

*Embrasures*, are the Cuts made through the *Parapet* of a *Battery* for the *Muzzles* of the *Guns*, and for the *Passage* of the *Shot*. When a *Battery* is brought on the *Glacis* of a *Place*, there are thick planks of *Wood* *Musquet-proof* to stop the *Embrasures*, as soon as the *Gun* is fired, to save the *Gunnery* and *Matrosses* that are employ'd about the *Guns* from the *small Shot*, which plays continually upon them from the *Besieged*. See *Battery*.

EMINENCE, is a *High* or *Rising* *Ground*, which *over-looks* and *commands* the *low* *places* about it; such *places* within *Canon-Shot* of a *fortified* *Place* are a *great* *Disadvantage*, for if the *Besiegers* become *Masters* of them, they can from thence *fire* into the *Place*.

EMPATEMENT, see *Talus*.

ENCIENTE, is the *Wall* or *Rampart* which *surrounds* a *Place*, sometimes composed of *Bastions* and *Curtins*, either *faced* or *lined* with *Brick* or *Stone*, or only made of *Earth*. The *Enciente*

is sometimes only *flanked* by *round* or *square* *Towers*, which is called a *Roman-Wall*.

ENFANS-PERDUS, see *Forlorn-hope*.

ENFILADE; to *Enfilade*, is to be *Masters* of a *Ground* from whence a *Post* or an *Enemy* is *flanked*, so that it may be *battered* all along a *Right* *Line*. At the *second* *Siege* of *Dole* in the year 1674, the *King* of *France* caused raise a *Battery*, which *enfiladed* or *scowred* the *whole* *length* of the *Rampart*, and *dis-mounted* three *Faulconets*, which the *Enemy* had *planted* there. In *conducting* the *Approaches* at a *Siege*, care must be had that they be not *enfiladed* from any *Work* of the *Place*, but that they be *carried* on with *Windings* and *Turnings* till they are brought to the *Glacis*, and then they are *carried* *strait* *forwards*, being *sunk* *deep* in the *Ground*, and *cover'd* *over-head*.

ENNEAGON, is a *Figure* or *Polygon* of *nine* *Sides*, and as many *Angles*, each capable of being *fortified* with a *Bastion*.

ENSIGN, is the *Officer* that carries the *Colours*, being the *lowest* *Commission'd* *Officer* in a *Company* of *Foot*, subordinate to the *Captain* and *Lieutenant*; it is a *very* *honourable* and *proper* *Post* for a *Young* *Gentleman*, at his *first* *coming* into the *Army*: He is to carry the *Colours* both in *Assault* or *Day* of *Battel*, and should be no ways *daunted* with *Danger*, nor should he *quit* his



*Colours*, but with his Life. In entering into a Place, mounting Guard, passing a Review, or going to Battel, he should carry his *Colours* himself on his Left Shoulder; but upon a March may have them carried by a Soldier, tho' this is not practised in the *English Army*.

**ENVELOPE**, is a Work of Earth made sometimes in the *Ditch* of a Place, sometimes without the *Ditch*, sometimes in fashion of a simple *Parapet*, and at other times like a small *Rampart* with a *Parapet*. *Envelopes* are often made to inclose a weak Ground, when it is to be done with simple Lines, to shun the great Charge of *Hornworks*, *Tennails*, or the like, or when they have not Ground for such large Works. The Castle of *Namure* has two *Envelopes* on the South-West side of the *Donjon*, one before the other, composed of two *Demi-bastions* and a *Curtin*, and call'd the first and second *Envelopes*, and without both these, a large Work extending itself on the top of the Hill with two *Demi-bastions*, call'd the *Terre-Neuve*, or *New Land*. The *Cittadel* of *Besanson*, which is situated on a high steep Rock, has three *Envelopes* one before another towards the *Campaign*, which serve as so many *Covert Ways* before the Moat. The Fort *Niwerburg* in *Holland*, is famous for its *Envelope* which goes quite round the *Fort*, and is trailed and palisaded with Stakes as thick as a Man's Body, yet it

was taken by the Duke of *Luxemburg*. There is a very good *Envelope* before the Port of *St. Servais* at *Maestricht*. *Douay* is environ'd with an *Envelope*, so is the Town of *Zratzein* in the *Palatinate*, yet were both taken by the Marquis of *Cezan*, the day that *Mareschal Turenne* gain'd the Battel over the Duke of *Lorraine* and Count *Caprara*, in the year 1674. Some give the Names of *Sillon*, *Counter-Guard* and *Conserve*, to such *Envelopes* as are made in the Moat; sometimes they are call'd *Lunettes*. See *Lunette* and *Sillon*.

**EPAULE**, or *Shoulder* of a *Bastion*, is the place where the *Face* and *Flank* meet, and form the *Angle* call'd the *Angle of the Shoulder*.

**EPAULMENT**, is a Work raised either of Earth, *Gabions* or *Fascines*, loaded with Earth to cover side Ways. The *Epaulements* of the Places of *Arms* for the *Cavalry* at the entering of the *Trenches*, are generally of *Fascines* mix'd with Earth.

*Epaulement*, or *Square Orillon*, is a Mass of Earth, of near a square Figure, faced with a Wall to cover the Cannon of a *Cazemate*.

**EPTAGON**, or *Heptagon*, is a Figure of seven *Sides* and seven *Angles*, capable of being fortified with seven *Bastions*.

**EQUILATERAL** Figure, whether *Triangle*, *Square*, &c. is a Figure whose *Sides* are all equal.

**ESCALADE**, see *Scalade*.  
ESCARPE,



ESCARPE, see *Scarpe*.

ESPLANADE, is the sloping of the *Parapet* of the *Covert Way* towards the *Campaign*; it is the same with *Glacis*, but begins to be antiquated, and is more properly the empty space betwixt a *Citadel* and the Houses of a *Town*.

ESTOLLE, see *Starr-Redoubt*.

ETAPPE, is a *French Term* for the Distribution of Provisions and Forrage to an Army in their Rout through a Kingdom, going to Winter Quarters, or returning to take the Field.

ETAPPIER, or *Undertaker*, is he that contracts with a Country or Territory, for furnishing Troops in their March with Provisions and Forrage. The *Etappier* is to deliver the *Etappe* to the *Majors* of Horse and Foot, or in their absence, to the *Quarter-Masters* of Horse, and *Serjeants* of Foot; they are not to give the *Soldiers* Money for their *Etappe*, because it would create Abuses. The Officers take sometimes a sum of Money from the *Etappiers*, and oblige the *Soldiers* to march two days march in one, which harasses both Men and Horse extremely, and is a great Abuse.

EVOLUTION, is the Motion made by a Body of Troops, when they are obliged to change their Form and Disposition, in order to preserve a Post, or occupy another to attack an Enemy with

more Advantage, or to be in a condition of defending themselves the better; and consists in *Doublings*, *Counter marches*, *Conversions*, &c. A Battalion doubles the Ranks when attacked in *Front* or *Rear*, to prevent its being flanked or surrounded; for then a Battalion fights with a larger *Front*. The Files are doubled, either to accommodate themselves to the necessity of a narrow Ground, or to resist an Enemy which attacks them in *Flank*; but if the Ground will allow it, *Conversion* is much preferable, because after *Conversion* the Battalion is in its first Form, and opposes the *File Leaders*, which are generally the best Men, to the Enemy; and likewise because doubling the Files in a new or not well disciplined Regiment, they may happen to fall in Disorder.

EXAGON, is a Figure bounded by six Sides or Polygons, making as many Angles capable of Bastions.

EXERCISE, is the Practise of all those Motions, Actions and Management of Arms, whereby a Soldier is taught the different Postures he is to be in under Arms, and the different Motions he is to make to resist an Enemy, which he must be perfect in, before he be fit for the Service.

EXTERIOR-POLYGON, see Polygon.

## F.

**FACE** of a *Bastion*, is the straight Line comprehended between the *Angle* of the *Shoulder* and the *Flanked Angle*, which is composed of the meeting of the two *Faces*, and is the most advanced part of a *Bastion* towards the *Campaign*. The *Faces* of a *Bastion* are the weakest parts of a Fortification, being the least flanked. It is therefore there where the Breach is generally made; for the opposite *Flank* being ruined, which should defend the Passage of the Moat, the Besiegers meet with less Opposition than they could expect in attacking any other part of the Rampart which is better flanked.

*Face* of a place, is the *Front* comprehended between the *Flanked Angles* of two neighbouring *Bastions*, composed of a *Curtin*, two *Flanks* and two *Faces*, and is likewise called the *Tenaille* of a place. In a Siege the Attacks are carry'd against both *Bastions* when the whole *Tenaille* is attack'd.

*Face Prolong'd*, is that part of the *Line of Defence Razant*, which is betwixt the *Angle* of the *Shoulder* and the *Curtin*, or the *Line of Defence Razant*, diminished by the length of a *Face*.

*Face* is likewise a word of Command; as *Face to the right* is to turn upon the left Heel a quarter round to the right. *Face to the left*, is to turn upon the right Heel a quarter round to the left.

*Face* of a Gun, is the Superficies of the Metal at the extremity of the muzzle of the Piece.

**FAGGOTS**, are Men hired by Officers, whose Companies are not full, to muster, and so cheat the Queen of so much Pay. In the late War, by a Proclamation all over the Army, any that could give notice of such an Abuse was promised a Reward in Money, and his Discharge if he desired it; and the Officer, who was guilty, was to lose his Commission, and be rendred incapable of ever serving his Majesty; and the *Faggot*, who was muster'd, was punishable with Death.

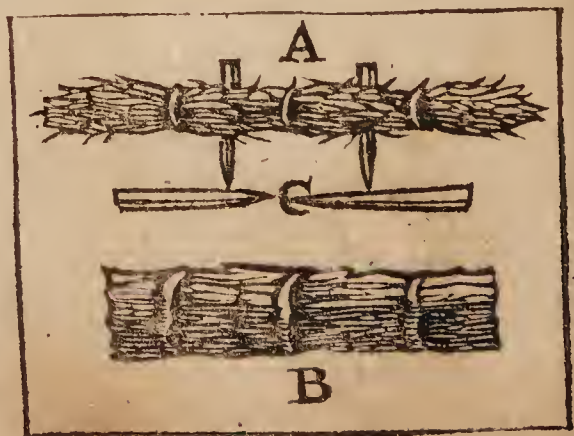
**FALCON** and *Falconette*, are small Guns; the first about two inches three quarters diameter of the Bore, and the other two inches; they are too small to be of use in the Field with an Army, and are now out of use.

**FALSE Alarm**, see *Alarm*.

**False Attack**, see *Attack*.

**FANIONS**, are small Flags carry'd along with the Baggage. See *Flags*.

**FASCINES**, are Faggots of small Wood, of about a foot di-



iameter



ameter and 6 foot long *A*, bound in the middle and at both ends; they are brought by the *Cavalry* to the entrance of the *Trenches*, from whence the Workmen carry them along to raise *Batteries* or other Works, to make *Chandeleers*, *Epaulments*, or to fill up the *Moat* to facilitate the passage to the foot of the Wall; they are likewise used in making the Sap or Descent into the Ditch, in making *Caponeers* and *Coffers*, and many other things; and being used so, are cover'd over with Earth or Raw-Hides, to prevent their being set on fire. They are used in fortifying a Place, especially where the Earth is bad, to bind the *Rampart*, where they are laid athwart ways and drove down with Stakes *C*, with a Bed of Earth above them, the *Fascines* again and Earth again, till the *Rampart* be finished; or to keep up the Earth of the *Parapet*, and then they're laid length-ways, and drove fast with Stakes of 3 or 4 foot long. There are shorter *Fascines* or *Bavins*, about a foot and a half long, which being pitch'd over, are to be thrown upon a Gallery or other Work of the Enemy, to set it on fire. In the year 1644, when his Royal Highness *Gaston of France*, Duke of *Orleans*, besieged *Graveline*, having made a Passage or Bridge over the *Moat* with *Fascines*, a *Neapolitan Soldier* of the Garrison endeavouring to burn this *Traverse*, his *Fireworks* rebounded on himself and burnt him, the *Fascines*

of the *Traverse* being covered with Raw-Hides. *Fascines* differ from *Saucissons*, the former being made of small Wood, and the latter of Branches of Trees *B*. *Fascines* are sometimes ordered to be made by the *Cavalry*, before a march over bad Ground, and are carried by them, each *Trooper* having one to mend the Ways.

FAUSEBRAYE, is a small *Rampart* about 3 or 4 fathom wide, bordered with a *Parapet* and *Banquet*, the Design of it is to defend the *Foss*; they are not reckoned so useful where there is a dry *Moat*, because the *Besiegers* may make better Works for the Defence of it than *Fausebrayes*, such as *Traverses*, *Scillons*, and *Coffers*. But in places surrounded with a wet Ditch, they may be more useful, provided they be made only before the *Curtin* and *Flanks*, for lying low, they cannot be easily hurt by the *Enemies Cannon*, and defend the *Foss* better, because of their low Situation, than the *Rampart*, which, because of its height, cannot so well discover the *Foss*. They ought never to be made before the *Faces*, especially in places faced with Brick or Stone, because the *Breach* being generally made in the *Face*, the Ruins and Rubbish of the *Rampart* are stop'd in the *Fausebray*, which facilitates the Ascent of the *Breach*; and in places lined with Brick or Stone, the pieces of Stone or Brick fly among the *Soldiers* that are in the *Fausebray*.



FELLING-AX, see *Ax*.

FELLOWS, are 6 pieces of Wood, each whereof form a piece of an Arch of a Circle of 60 Degrees, and join'd all together by Duledges, make an entire Circle, which, with the addition of a Nave and 12 Spokes, make a Wheel. See the Proportion of them at *Wheel*.

FICHANT. *Line of Defence Fichant*, see *Line*.

FIELD-OFFICERS, are those that have the Power and Command over a whole Regiment; such are the Colonel, Lieutenant-Colonel and Major, but such whose Commands reach no further than a Troop or Company, are not *Field-Officers*. See *Officers*.

*Field-Pieces*, are small Guns proper to be carried along with the Army into the Field, such as 3 Pounds, Minions, Sakers, 6 Pounds, Demi Culverins, and 12 Pounds, which, because of their smallness, are easier drawn, are a less Charge, require lesser quantities of Ammunition, and are easier served.

*Field-Staff*, is a Weapon carried by the Gunners, about the length of a Halbert, with a Spear at the end, having on each side Ears screw'd on, like the Cock of a Match Lock, where the Gunners screw in lighted Matches when they are upon Command; and when the *Field-Staffs* are said to be armed,

FILE, is the Line of Soldiers standing one behind another, which is the depth of the Batta-

lion or Squadron. The *Files* of a Battalion of Foot, are generally six deep, and those of a Squadron of Horse three. The *Files* must be streight and parallel one to another; to double the *Files*, is to put two *Files* into one, which makes the depth of the Battalion double of what it was in number of Men. The *File-Leaders* are the foremost Men in each *File*; the *Bringers up* are the last Men of each *File*, or the last Rank of the Battalion; the *half File-Leaders*, is the fourth Rank, because the fourth, fifth and sixth Ranks are call'd the *Rear half Files*, as the first, second and third are the *Front half Files*.

To *File off*, is the same as to *Defile*, or to file off from a large Front to march in length. An Army is said to file off from the Right or from the Left, when the Squadrons begin to move from the Right or Left, marching one after another, and so reducing the two Lines or Ranks of the Army to two long *Files*. A Battalion is said to file off, when it marches by Divisions or Sub-divisions.

FIRE, is a Word of Command, to the Foot Soldiers to discharge their *Musquets*, to the Cavalry to discharge their *Carabines* or *Pistols*, to the Grenadiers to fire their *Grenades*, and to the Gunners to fire the *Guns*. *Running Fire*, is when a Rank of Men drawn up, fire one after another, or when the Lines of an Army are drawn out to fire Victory,



for which each *Squadron* and *Battalion* takes it from another, from the Right of the first Line to the Left, and then from the Left to the Right of the second Line.

*Fire-Arms* ; under this Name are comprehended all sorts of Arms that are charged with Powder and Ball , as *Cannon*, *Musquets*, *Carabines*, *Pistols*, *Blunderbusses*, &c.

*Fire-Ball*, is a Composition of



*Meal-Powder*, *Sulphur*, *Salt petre*, *Pitch*, &c. about the bigness of a *Hand Grenade* A, coated over with *Flax*, and primed with a slow Composition of a *Fuze*, to be thrown into the *Enemies Works* in the *Night* time, to discover where they are ; or to fire *Houles*, *Galleries*, or other *Blinds* of the *Besiegers* ; but they are then armed with *Spikes* or *Hooks* of *Iron* that they may not roll off, but stick or hang where they are designed to have any *Effect*.

*Fire-Lock*, or *Fusil*, is a *Fire Arm* carried by a *Foot Soldier* ; the *Barrel* of it is about three foot eight inches long, the *Stock* is about 4 foot and eight inches, and the *Bore* is fit to receive a *Bullet* of *Lead* of an ounce weight.

*Fire-Master*, is an *Officer* who gives the *Directions* and *Proportions* of *Ingredients* for each *Composition* required in *Fire-works*, whether they be for *Pleasure-Works*, such as *Balloons*, *Rockets*, &c. or for the *War*, as *Fuses*, *Fire balls*, *Carcasses*, *Quick-match*, &c. or firing of *Bombs*, *Petards*, and *Hand Grenades* ; these *Orders* are given to the *Fire-Workers* and *Bombardeers* who execute them. The chief *Fire-Master* of *England*, is a *Post* belonging to the *Office* of *Ordnance*.

*Fire-Pots*, are small *Earthen Pots*, into which is put a *Grenade* filled with *Powder*, and then the *Pot* is filled with *fine Powder* till the *Grenade* be covered, then the *Pot* is covered with a piece of *Parchment*, and two pieces of *Match* across lighted ; this *Pot* being thrown by a *handle* of *Match* where it is design'd, it breaks and fires the *Powder* and burns all that is near it, and likewise fires the *Powder* in the *Grenade*, which ought to have no *Fuze*, to the end its *Operation* may be the quicker. See the *Figure* at *Fire Ball*, B.

*Fire-Workers*, are *Officers* subordinate to the *Fire-Masters*, but command the *Bombardeers* ; they receive the *Orders* from the *Fire-Master*, and not only see them executed, but work themselves along with the *Bombardeers* ; there are twenty four *Fire Workers* establish'd in the *Office* of *Ordnance*.



*Fireworks*, are the Works made by the *Fire-Workers*, whether for War or Recreation.

**FLAGS**, in *French Fanions*, are small Banners of Distinction stuck in the *Baggage-Waggons* of the Army, to distinguish the Baggage of one *Brigade* from another, and of one *Battalion* from another, that they may be marshalled by the *Waggon-Master-General*, according to the Rank of their *Brigades*, where they are to keep during the March, to avoid the Confusion that otherwise would be.

**FLANK**, is that part of the *Rampart* which joins the *Face* and the *Curtin*, comprehended betwixt the *Angle* of the *Curtin* and the *Angle* of the *Shoulder*, and is the principal Defence of a Place. *Engineers* have differed very much about raising the *Flank*, some make it perpendicular on the *Face*, some on the *Curtin*, others perpendicular on the *Line of Defence*, some give it an *Angle* of 98 Degrees with the *Curtin*, and *Vaubon* makes it the Chord of a *Segment*, whose Centre is the *Angle* of the *Shoulder* of the next *Bastion*; its use is to defend the *Curtin*, the *Flank* and *Face* of the opposite *Bastion*; to defend the Passage of the Moat, batter the *Saillant Angles* of the *Counterscarp* and *Glacis*, from whence the Besieged generally ruin the *Flanks* with their *Artillery*, for the *Flanks* are the parts of a *Fortification* which the Besiegers endeavour most to ruin, because of taking away the Defence of the *Face* of the opposite *Bastion*.

*Flank Oblique*, or *Second Flank*, is that part of the *Curtin* from whence the *Face* of the opposite *Bastion* may be discovered. This shows in a Plan upon Paper to be a good Defence, but is rejected by most *Engineers* as no ways useful for its being ruined at the beginning of a Siege, especially if it be of a sandy Earth; the second *Parapet* which may be raised behind the former, is of no use, for it neither discovers nor defends the *Face* of the opposite *Bastion*, besides it shortens the *Flank* which is the true Defence, and the continual Fire of the Besiegers Cannon will never suffer them to raise a second *Parapet*. This second *Flank* defends very obliquely the opposite *Face*, and is to be used only in a Place which is to be attacked by an Army without Cannon, as being only a conceited Opinion of *Cabinet-Engineers*.

*Flank Retired*, or *Low Flank*, is one of the *Platforms* of the *Cazemate*, and is sometimes call'd the *Cover'd Flank*. This is generally called the *Cazemate*, when there is only one *Platform* retired towards the Capital of the *Bastion*, and covered by an *Orillon*; these retired *Flanks* are a great Defence to the opposite *Bastion*, and to the Passage of the Moat, because the Besiegers cannot see nor easily dismount their Guns.

*Flanks of an Army*, are the Troops encamped on the Right and Left. *Flanks of a Battalion*, are the Files on the Right and Left.



To *flank*, is to attack and fire upon the Flank of an Enemy; it is a very common Term, and very essential in *Fortification*, for all Works that have only their Defence right forwards are deficient, and must have each place to flank another, and be flanked reciprocally, otherwise it is not in Perfection. The *Curtin* is the strongest part of a *Fortification*, because it is flanked at both ends by the *Flanks*, and the *Face* having but one Defence from the opposite *Flank*, is counted the weakest.

*Flanked-Angle*, see *Angle*.

*Flask*, is a Horn or such a thing made for carrying of Powder, and has a measure of the Charge of the Piece for the top.

FLYING-ARMY, see *Army*.

*Flying-Bridge*, see *Bridge*.

FOOT, are such as list themselves under a *Captain* to serve on Foot, and are armed with a *Sword*, *Bagonet*, *Fire lock* or *Pike*, *Collar* of *Bandealers*, *Cartridge-Box*, &c. The Foot are formed into *Companies*, and according to the Articles of War, a *Soldier* is not to leave his *Company* without leave from his Officer to go about his own Business, without being reputed a *Deserter*, and tryed for his Life. These *Companies* are formed into *Regiments*, called *Regiments of Foot*.

*Foot*, as it is a Measure, contains 12 inches, and each inch 12 Lines; 6 foot make a *Fathom*, which is a Measure equal to the *Toise* in France; 5 foot make a

*Geometrical Pace*, 3 foot an *English Yard*, and two foot and a half make a *Common Pace*. To be on the same *Foot*, is to be in the same Circumstances with another. A *Regiment* is said to be on the same *Foot* with another, when it has the same number of Men and the same Pay. To gain or lose *Ground Foot by Foot*, is to dispute a Post resolutely with an Enemy, losing it by degrees, and defending every bit of it to the utmost.

*Foot-Bank*, is a small step of Earth, on which the *Soldiers* stand to fire over the *Parapet*; there are generally two, and sometimes three, but the height of the *Parapet* from the uppermost *Foot-Bank*, ought always to be four foot and a half. See *Banquet*.

FORELAND, see *Liquere*.

FORGE, is an Engine carried along with the *Artillery* for the *Smiths*, and is a travelling *Smiths Forge*. *Forge for hot Ball*, is the place where the Ball are made hot before they be fired off; it is built of Brick, and hath a *Furnace* below, over which are Bars of Iron; it is cover'd over-head, and the Balls laid upon the Bars till they be red hot, and are taken out with long *Ladles* to be put in the Gun. The Materials for such *Forges* are carried along with the *Artillery*, when there is any design of burning *Magazines* or the like with hot Ball.

FORELORN in *French Enfans Perdus*, are Men detached from



from several *Regiments*, or otherwise appointed to make the first Attack in Day of Battel, or at a Siege to be the first in storming the *Counterscarp*, mounting the *Breach* or the like. They are called so from the eminent Danger they are exposed to; but this Word is old, and begins to be obsolete.

FORMERS are of several sorts, but the chief is for making *Cartridges* for Cannon; they are round pieces of Wood fitted to the diameter of the Bore of a *Gun*, on which the *Paper*, *Parchment*, or *Cotton* which is to make the *Cartridge*, is rolled before it be sewed.

FORRAGE, is the *Hay*, *Oats*, *Barley*, *Wheat*, *Grass*, *Fitches*, *Clover*, &c. which is cut down and brought into the Camp by the *Troopers*, for the Subsistence of their *Horses*; it ought to be chiefly considered by the *Quarter-Master General* in encamping an Army, that it be in a Country of *Forrage*; it is he that orders the Method of the forraging, and posts the Guards for the security of the *Forragers*. *Dry Forrage*, is the *Hay*, *Oates* and *Straw* which is delivered out from the *Magazines*, to the Army in *Garrison*, or when they take the *Field* before the *Forrage* be grown up.

FORT, is a Work inviron'd on all sides with a *Moat*, *Rampart*, and *Parapet*; the Design of it is to secure some high Ground, or the Passage of a River, to make good

an Advantagious Post, to fortifie the Lines and Quarters of a Siege, and several other things. They are of different Figures, and are made smaller and greater, according as the Ground requires; some are in the shape of *Bastions*, as the *Fort* raised on the side of the Hill of *Bouge* at *Namure*, or the *Fort* raised in 1701, by *Coeborne* on *St. Peter's Hill* at *Mastricht*, called *St. Peter's Fort*; some are fortify'd with entire *Bastions*, others with *Demi-bastions*; some are raised on a Square, and others on a *Pentagon*. The *Fort de la Lippe* near *Wesel*, is a Square with four large *Bastions*, but was taken in less than one hour by the Prince of *Conde*, in 1672. The *Fort St. Andrew* in the *Isle of Bommel*, is a *Pentagon*. A *Fort* differs from a *Citadel*, because this last is always raised by the Orders of the *Sovereign*. Small *Forts* are made in form of a *Star*, having five, six or seven *Angles*, and are raised for the security of the Lines of *Circumvallation*.

FORTIFICATION, is an Art by which a Place is put in a posture of Defence, so that every one of its parts defends and is defended by another, and discovers the Enemy in *Front* and *Flank*, opposing to an Enemy the breadth and depth of a *Foss*, and the height and solidity of the *Rampart*, so that a small Body of Men behind this Wall may be able to resist a great Army. *Fortification* is likewise taken for all the



the Works that serve to cover or defend a strong Place. It is also the Art by which an *Engineer* makes Plans and Designs, raises different sorts of Works, digs the *Foss*, faces the *Ramparts*, and conducts the *Approaches*, either in the Attack or Defence of a Place: In short, it requires an *Engineer* to be a good Designer, Architect, Miner, and Mechanick, and to understand Gunnery.

*Fortification Ancient*, were Walls or Defences made of Trunks and Branches of Trees mix'd with Earth, to secure them from the Violence of an Enemy. this they altered afterwards to Walls of Stone, to secure them from surprizes; and to resist the Efforts of an Enemy, they raised little *Walls* or *Parapets* on the top of the other, behind which they made use of their Darts in Security, being cover'd from the Enemies sight by these small *Parapets*, which they cut into Loop-holes and Battlements to facilitate the Effect of their Darts, and these Walls were flanked by round or square Towers. *Modern Fortification*, is that which is flanked and defended by *Bastions* and *Out-works*, and whose Works are so solid, that they are Proof against the force of Cannon, and cannot be beat down, but by a continual Fire from several Batteries of Cannon.

*Fortification Artificial*, are the Works raised by an *Engineer*, to strengthen the natural Situation of a Place, by repairing and sup-

plying its Defects; such as *Ravelins*, *Half Moons*, *Horn-works*, *Redoubts*, &c. *Natural Fortification* consists in a place's being strong by Nature, such as being situated on a Hill or in a Marsh, or any other way, which makes it of difficult Access, whether it be occasion'd by Rivers, Marshes, strong Defiles, or the like.

*Fortification Defensive*, regards the Precautions and the Industry by which a weak Party opposes a stronger, and concerns particularly the *Governours* of Places, who knowing the weakness and the strength of the Place intrusted to them, ought to endeavour to secure it from Surprizes and Attacks. *Fortification Offensive*, has a regard to the several Ways of annoying an Enemy, and concerns particularly the *General* of an Army in the Field, who designs to lay Siege to some of the Enemies Towns: this teaches him how to take all Advantages in marching or encamping his Troops, the Order and Dispositions of Battels, and the manner of carrying on a Siege, and of taking of Towns, &c.

*Fortification Regular*, consists in a Place's being regularly fortified, the sides of the *Polygon* being of a length, and the *Angles* equal; in its being defended by *Bastions* and other Works, whose relative parts are equal and uniform. *Irregular Fortification*, is when a Town has such an Irregular Situation, as renders it incapable of being regularly fortified, both because of  
the



the difference of its sides, some being too long, others too short; as likewise because of its being surrounded with Precipices, Valleys, Ditches, Rivers, Hills, Rocks or Mountains, and must therefore be fortified with Works suitable to the Situation.

FOSS, see *Moat*.

FOUCADE, *Fougade*, or *Fougasse*, is a small *Mine* under a *Post*, which is in danger of falling into the Enemies hands, to blow it up; it is thus made; they dig a hole or pit in the ground about eight or ten foot wide, and ten or twelve deep, which is fill'd with Sacks of Powder, upon which are laid pieces of Wood cross ways, with Stones and Earth and whatever else can make a great destruction; this is fired by the help of a *Saucifs* or *Train*, which has a communication with the *Counter-scarp* or some other *Post*. We could not keep footing in the *Half-Moon* we had carry'd, because of two *Fougades* sprung by the Enemy, which ruined the Lodgement we had made in the *Gorge*.

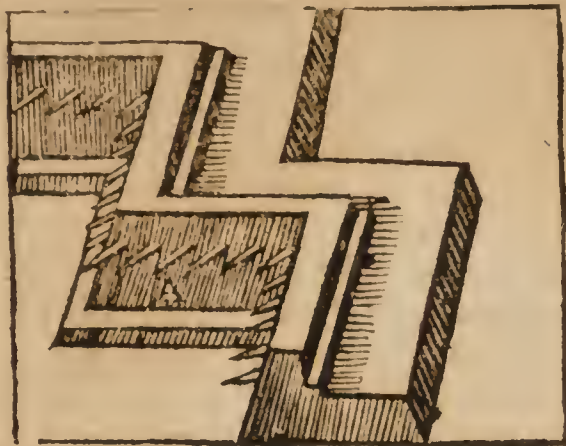
FOURNEAU, *Powder-Chamber*, or *Chamber of a Mine*, is a Hole or Cavity made under a Work, the Top of which is sometimes cut into several Points like Chimneys to make more passages for the Powder, to the end it may have its Effects on several sides at the same time; and sometimes it is in form of a hollow Cube, about five or six foot large: the Charge of a *Chamber* or *Fourneau* is about 1000 *ll.* of Powder put into Sacks

or Barrels, so that the *Saucifs* or *Pudding* may fire them all at once. It is left to the Judgment of the Engineer or Miner to augment or diminish this Quantity as he thinks convenient, and to proportion it to the Nature of the Ground or Rock on which the Work is raised, which is to be blown up; for if a great deal of Powder meet with little Resistance, it makes only a hole by raising the Earth above it with a great Violence. Sometimes they make four or five Chambers under a Work, and put but a small Quantity of Powder in each, as 100 *ll.* or the like. At the Siege of *Candy*, the *Turks* and *Venetians* made *Fourneaus* under the Rock of the *Demi bastion* of *St. Andrew*, which were charged with 70 Barrels of Powder. A *Fourneau* ought not to be charged till it be ready to spring, because the Powder lying too long in the Humidity of the Earth, loses its Force. When the Powder is put in Barrels, one of the Staves must be taken out, and a quantity of Powder scatter'd round; if it be in Sacks, they must be ript and Powder strowed about, that they may fire all at once. The Mouth of the *Fourneau* is to be stopp'd with great Planks and pieces of Wood, and the Vacancy which is left, after the *Fourneau* is charged, must be fill'd with Stones and pieces of Wood, and all the Turnings well stopp'd.

FRAISES are pieces of wood of six or seven foot long, planted under



under the *Cordon*; and in places which are not faced with Stone or



Brick, they are planted at the Base of a *Parapet*, being let about half way into the *Rampart*; they are not laid parallel to the *Base* of the *Rampart*, but a little sloping downwards with their Points, that Men cannot stand on them; their chiefest use is to hinder the Garrison from Deserting, which would be easie without them, especially in Places with dry Moats. They likewise prevent Surprizes and Escalades. See *A* in the Figure.

To *Fraise a Battalion*, is to line the *Musquetters* round with the *Pikes*, that if they should be charged with a Body of Horse, the *Pikes* being presented, may cover the *Musquetters* from the shock of the Horse, and serve as a *Barricade*.

**FRONT** of a *Battalion* is the first Rank or the *File-Leaders*; it is likewise called the *Face* or *Head* of a *Battalion*. *Front* of a *Squadron* is the first Rank of *Troopers*. *Front* of an *Army* is the first row of *Tents* in the first *Line*, which are the *Quarter-Masters Tents* in

the Horse, and the *Serjeants* in the Foot.

*Front of a Place*, is the same as the *Face of a Place*, or the *Tenaille*, being all that is contained between the *Flanked Angles* of two neighbouring *Bastions*, viz. the two *Faces*, two *Flanks* and the *Cur-tin*.

**FUSE** is a Pipe of Wood drove full of a Composition of *Meal Powder*, *Salt Petre* and *Sulphur*, having some *Threads of Quick-match* fixed in the top of it. When it is used it is drove into the *Bomb*, being first cut according to the Distance the *Bomb* is to be thrown, and the time it may be supposed to stay in the Air, that it may be spent, and the *Bomb* break as it falls; when the *Bomb* is put in the *Mortar*, the *Cape* of the *Fuse* is cut off, and the *Quickmatch* spread out of the *Fuse* upon the *Bomb*, and salted with a hand-full of *Meal-powder*, which takes fire from the flash of the *Mortar*, and fires the *Fuse*. See *Bomb*.

**FUSIL**, see *Firelock*.

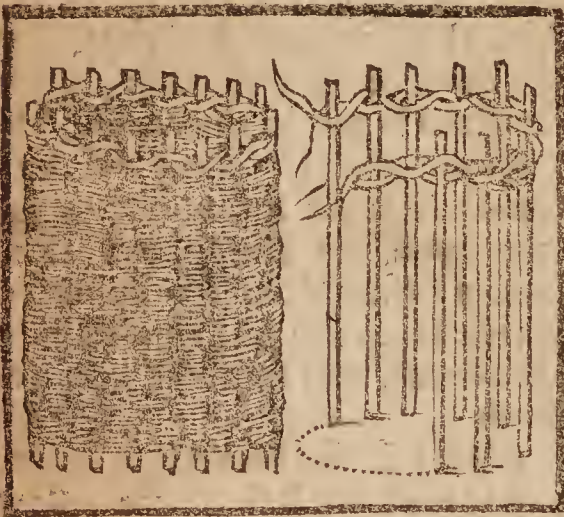
**FUSELEERS**, are *Foot Soldiers* armed with *Fusées*, with *Slings* to sling them. There are four *Regiments* in our *Army*, which have always been called *Fuseleers*; and go by the Name of the *English*, *Scotch*, *Irish* and *Welch Fuseleers*, but now we have none but *Fuseleers* abroad, for the *Pikes* are quite laid aside. The first Design of *Fuseleers*, was to guard the *Artillery*, for which End the *Regiment of English Fuseleers*



leers now commanded by Sir Charles O Hara were first raised to supply the want of *Pikes*, and to secure themselves against *Horse*. The *Fuseleers* used to carry *Turn-pikes* along with them, which in a *Camp* were placed along the front of the *Battalion*, and on a *March* were carried by the *Soldiers*, each carrying one of the short *Pikes*, and two by turns the *Sparr* through which they are thrust, so that they were quickly put together.

G.

GABIONS, are *Baskets* of 5



or 6 foot high, and 4 or 5 broad, equally wide at top and bottom; they are made of pieces of *Willow* of about six foot long, stuck in the *Ground* in a *Circle*, which they work round with small *Branches*, *Leaves* and all, and afterwards fill them with *Earth* to make a *Cover* or *Parapet* betwixt them and the *Enemy*; they are sometimes used in making *Batteries*, and are brought empty to

the place, and placed three a breast, which makes the distance between the *Embrasures*; two are placed behind these, so as to cover the *Joinings* of the first three, and one behind the two, which make the *Embrasure* wide enough at the outside, these six *Gabions* being the *Merlon*; the *Pioneers* or *Soldiers* employed for that use, fill them with *Earth*, but they are never so good as a *Battery* raised of *Earth* or *Fascines*, because, if there be a *Counterbattery* to play upon them, they are easily ruined. Sometimes they are used in making *Lodgments* on a *Post*, and sometimes in making the *Parapet* of the *Approaches*, especially when the *Attack* is carrying on, thro' a rocky *Ground*. At the *Siege* of *Namure* in the year 1695, the third night after opening the *Trenches* at the *Village* of *Bouge*, the *Ground* was so strong and full of *Rocks*, that we were forced to use *Gabions*, and to bring the *Earth* a great way to fill them. When the *Approaches* are got near the *Covert Way*, the *Besiegers* endeavour to set the *Gabions* on fire by small *Fascines* or *Bavins* pitch'd over, which they throw upon them. See the *Figure*.

GALLERY for passing a *Moat*, is a covered *Walk* made of strong *Beams*, and cover'd over-head with *Planks*, and loaded with *Earth*: 'twas formerly used for putting the *Miner* to the *Foot* of the *Rampart*: sometimes the *Gallery*



is covered over with *Raw-Hides*,



to defend it from the Artificial Fires of the Besieged. The *Gallery* ought to be very strong of double Planks on that side towards the *Flank*, to make it *Musquet Proof*. It is made in the *Camp*, and brought along the *Trenches* in pieces to be join'd together in the *Foss*; it ought to be eight foot high, and ten or twelve wide; the Beams ought to be half a foot thick, and two or three foot asunder; the Planks or Boards nailed on each side, and filled with Earth or Planks in the middle; the covering to rise with a ridge, that what is thrown upon it by the Besiegers with a Design to burn it, may roll off. See the *Figure*.

*Gallery of a Mine*, is the same as *Branch of a Mine*, and is a Passage under ground of three or four foot wide under the Works, where a *Mine* or *Countermine* is carried on. The Besieged and the

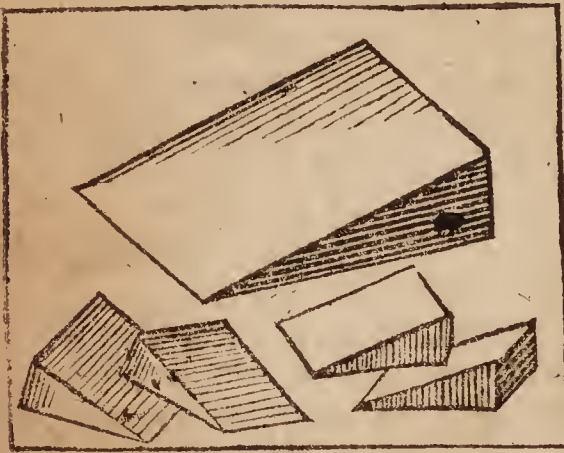
Besiegers carry each of them *Branches* under ground in search of each others *Mines*, which often meet and destroy one another, or at least disappoint the Effect of the *Mine*. Our *Miners* having heard those of the Enemy, fixed a *Petard* in their *Gallery*, which pierced into the Enemies, and cast such a *Smoak* as stifled most of the *Work-men*. See *Mine*.

*GARRISON Town*, is a strong Place, in which *Troops* are quartered, and do Duty for the Security of the Place; keeping strong Guards at each *Port*, and a Main Guard in the *Market Place*. The *Troops* that are put into a Town, either for their Security or Subsistence in the *Winter* time, or are there in the *Summer* for the Defence of the Place, are called the *Garrison of that Town*.

*GATE*, is made of strong Beams and Planks, with Iron Bars, and turns upon Hinges, to secure the Entry of a Town against an Enemy. The *Gate* is generally in the middle of the *Curtin*, and has the Defence of both *Flanks*; those which are in the *Flank*, weaken the most necessary part of the *Fortification*, and when they are in the *Face*, they are still more prejudicial to the *Bastion*, which ought to be clear, to make *Retrenchments* upon Occasion. The *Gates* of a strong Place are shut about five a Clock in the *Winter*, six in the *Spring*, and seven or eight in the *Summer*, and are opened at seven, six and five. At the opening of the *Gates*,

*Gates*, a Party of Horse is sent to *Patrouille* in the Country round the Place, to discover *Ambuscades* or *Lurking Parties* of the Enemy, and to see if the Country be clear. In some Garrisons the Guard mounts at the opening of the *Gates*, so that in case of a Surprise, both the Old and the New Guards being under Arms, they are in a Condition of making a good Defence. The Word nor the Orders ought never to be given, till after the *Gates* are shut, for fear of Spies lurking in the Town, that may carry Intelligence to the Enemy.

**GAZONS**, are Sods or pieces



of fresh Earth covered with Grass, about a foot long, and half a foot broad, cut in form of a Wedge to line the *Parapet*; if the Earth be fat and full of Herbs, it is the better; they are made so, that their Solidity makes a Triangle; to the end, that being mixt and beat with the rest of the Earth of the *Rampart*, they may easily settle together and incorporate in a Mass with the rest of the *Rampart*. The first

Bed of *Gazons* is fixed with pegs of Wood; the second Bed ought to be laid to bind the former that is over the Joints of it, and so continued till the *Rampart* be finished; betwixt these Beds they generally sow all sorts of binding Herbs to strengthen the *Rampart*.

**GENS-D'ARMES**, are a Body of Horse divided into Independent Troops, called so, because formerly they fought in Armour; they are part of the King of France's Household; these Troops are commanded by *Captain-Lieutenants*, the King and Princes of the Blood being their *Captains*; the King's Troop, besides a *Captain-Lieutenant*, has two *Sub-Lieutenants*, three *Ensigns*, and three *Guidons*. The other Troops which are those of the *Scots Gendarmes*, the *Queen's*, the *Dauphin's*, the *Gendarmes of Anjou, Burgundy*, the *English and Flemish Gendarmes*, and those of the Duke of Orleans, are called the *Small Gendarmery*, and have each a *Captain-Lieutenant*, *Sub-Lieutenant*, *Ensign*, *Guidon*, and *Quarter-Master*. They carry a *Standard* longer than the Light Horse, and divided into two Points a little rounded, generally adorn'd with some Device or Cypher in Embroidery and a Fringe; each Troop has a pair of *Kettle-Drums*, and two *Trumpets*.

**GENERAL** of an Army, is he who commands in chief, and is the same in an Army as the Soul is in the Body; for as all the Actions of the Body proceed from



from the Motions of the Soul, so that great number of *Regiments* ought to do nothing but by the Orders of the *General*; who ought to be a Man of Courage and Conduct, to have a great Experience, to be of good Quality, and Liberal; his Valour makes him a Terror to his Enemies, and upon his Conduct depends the Safety of the Army, therefore I think it the greater Qualification; for Bravery without Conduct, has often brought things to Extremity. A *General's* Conduct appears in establishing his Magazines in convenient Places, in examining the Country, that he do not engage his *Troops* too far, without knowing which way to bring them off, and to subsist them, and in knowing to take the most Advantageous Posts, either to fight or shun a *Battel* at his Pleasure: His Experience makes his Army have such Confidence in him, that they reckon themselves sure of Victory before they engage: His Quality begets a greater Respect, and augments his Authority: His Liberality gets him Intelligence of the Enemy, of their Strength and Designs, without which he is in the dark, and cannot know which way to take his Measures; he ought therefore to encourage his *Spies*, and to have such as he knows are more inclin'd to him than to the Enemy. A *General* ought likewise to be naturally inclin'd to great Enterprizes, to be a lover of Glory, and to have an

aversion to Flattery; to make himself beloved by every body, by treating his Officers with Civility, hearing their Reasons, and praising and rewarding good Actions, and punishing Crimes; he ought notwithstanding to be rigorous and severe upon Occasion, in seeing his Orders punctually observed, otherwise Military Discipline would be lost. The Function of a *General*, is to regulate the March of the Army and their Encampment, to visit the Posts, to command Parties for Intelligence, to give out the Orders and the Word every night to the *Lieutenant* and *Major-Generals*; in day of *Battel*, he chuses the most Advantageous Ground, makes the Disposition of his Army, posts the Artillery, sends off the Baggage to a place of Security, and sends his Orders by his *Aid de Camps*, where there is Occasion. At a Siege, he causes to invest the Place; he views and observes it, orders the making of the Lines of *Circumvallation* and *Contrevallation*, and making the Attacks; he visits often the Works, and makes Detachments to secure his Convoys. The Charge of a *General* is of a great Extent, and requires a particular Care, because it is on him the Sovereign reposes the Care of all his Army. His Royal Highness Prince George of Denmark, is now *Captain General* of all Her Majesty's Forces by Sea and Land, and his Grace the Duke of Marlborough, *Captain General* of Her Army,



that acts in Conjunction with the *Emperour* and the *States General*.

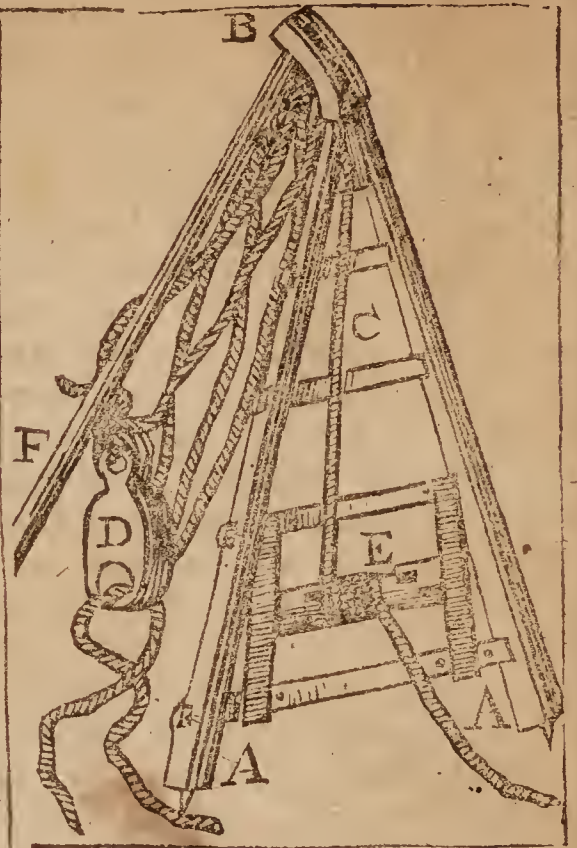
*General of Horse*, and *General of Foot*, are Posts next under the *General* of the Army, and ought to be in the hands of Men of a singular Merit, who, by their Birth or good Qualifications, have rendered themselves deserving of so great an Employ. They have an absolute Command over all the Horse or Foot in an Army, upon all Occasions, above the *Lieutenant-Generals*.

*General of the Artillery*, or *Master-General of the Ordnance*, is one of the greatest Employs in the Kingdom, being a Charge of great Trust; it is generally bestowed on one of the first Peers of the Kingdom, and is at present enjoyed by his Grace the Duke of *Marlborough*; he has the Management of all the Ordnance of the Kingdom, and ought to know and consider whatever can be serviceable or useful in the *Artillery*, and to distribute the Vacancies to such as are qualified for them; and has for his Assistants in that Employ, a *Lieutenant-General*, who commands in the absence of the *General*; a *Surveyor General*, *Clerk*, *Store-keeper*, and *Clerk of Deliveries*, who are called the Principal Officers of the Ordnance; they meet three times a week at the *Tower*, about the Concerns of the Ordnance.

*General*, is likewise a beat of the *Drum*, see *Drum*.

*GIN* or *Crab*, is an Engine for mounting *Guns* on their *Carri-*

*ages*, or dismounting them; it is



made of three pieces of Oak, Ash, or other strong Wood, of about 14 foot long, two of which are join'd by *Transums*, but so that they are wide asunder at bottom, as *A*, *A*, and join at the top, on a strong piece of Wood crooking forwards, called the *Head*, *B*, in which are three Pullies of Brass, over which comes a Rope, *C*, called the *Gin-Rope*, which goes likewise through other Pullies in a short strong piece of Wood, called the *Block*, *D*, and returns through the Head down the back of the *Gin*, and goes round a *Windlace*, *E*; the other piece is round, *F*, one end of it goes into the Head, and the other stands on the Ground, so that the three make a Triangle; it is called the *Pye*; when a *Gun* is to be



be mounted, there is a strong Rope tied through the *Block* and the *Trunions*, so that the *Windlace* being turned round, the *Gun* is lifted up and placed in her *Carriage* with ease.

*To give Ground*, is to retire or quit a *Post*, when it is attacked by an *Enemy*. *To get or gain Ground*, is to have the *Advantage* of the *Enemy*, and to force them from a *Post*.

**GLACIS**, is that *Mafs* of *Earth* which serves as a *Parapet* to the *Covert Way*, which slopes easily towards the *Campaign*. the difference betwixt *Talus* and *Glacis*, is, that in the one the height is more than the *Base* of the *Slope*, and in the other, the *Base* of the *Slope* is more than the height; the breadth of the *Glacis* is generally the length of the *Flank*, but the largest are the best; it is likewise called *Esplanade*, but that *Word* begins to be out of use. The *Soldiers* corruptly call the top of the *Glacis* the *Counterscarp*. When the *Approaches* are brought to the foot of the *Glacis*, they are so near, that they cannot turn any way but they must be *enfiladed*, therefore they are carried straight forwards by *Sap*, unless it be resolved to carry the *Covert Way* by *Assault*.

**GORGE** of a *Bastion*, is that space which is taken equally on each side of the *Angle* of the *Figure* on the sides of the *Polygon*, which makes the *Entry* into the *Bastion* from the *Town* or *Place*, one half of which is called the

*Demi-gorge*; there is a *Proportion* to be observed betwixt the *Gorge* and the other parts of the *Fortification*, as the *Curtin* and *Flanks*; if the *Gorge* be too large, the *Flanks* must be shorter, which is a great fault, they being the principal *Defence* of the *Place*, and a long *Flank* always is better than a large *Gorge*. If the *Gorge* be too small, the *Bastion* is likewise contracted so small, that there is no ground left to entrench behind the breadth. *Gorge* of a flat *Bastion*, is a right *Line* which terminates the distance between two *Flanks*. *Gorge* of a *Half Moon*, is the distance between the two *Flanks*, taken on the *Angle* of the *Counterscarp*. That of a *Ravelin*, is the distance between the two *Sides* or *Faces* towards the *Place*; the *Gorges* of all other *Out-Works*, are the *Entry* into them from the *Place*, or the distance between their *Sides*, and ought to be without a *Parapet*, only plain, for fear the *Besiegers* being *Masters* of the *Work*, should find there a *Cover* from the *Fire* of the *Place*; yet they are sometimes *palisaded* to prevent a *Surprize*. In a *Siege* they are generally *undermined*, that they may be blown up before the *Enemy* can make a *Lodgment* upon them.

**GORGET**, is a piece of *Brass* or *Silver* worn by *Officers* upon *Duty* upon their *Breast*, hanging round their *Neck* in a *Riband*; they are sometimes gilded, having some *Device* engraved on

them, as the *Colonel's Coat of Arms*, his *Crest*, or his *Cypher*.

**GOVERNOUR**, is a very considerable Officer, and has a great Trust reposed in him, and ought to be very vigilant and brave, knowing that it is more Honour to defend one Town, than to take two, because the abundance of Provisions and number of Men, is greater with the Besiegers than in the Garrison, the former being likewise Masters of the Country, and the others shut up. He ought to be always prepared for a Siege, to have a particular Care of the *Ramparts*, *Parapets*, and other Defences of the Place; that the *Foss* or *Moat* be kept clean and in good Order, and the *Out-Works* in good Repair, and well Palisaded; he ought frequently to visit the Magazines, to see that every thing be in Order, and whether there be a sufficiency for a Siege; to consider the quantity of Grain and other Provisions, and to have Registers of all the Stores, and to neglect nothing which tends to the Defence of the Place, because he must answer for it at the peril of his Head. His Charge is to order the *Guards*, the *Rounds*, and the *Patrouilles*, to give every night the Orders and the Word after the Gates are shut, to visit the *Posts*, to see that both *Officers* and *Soldiers* do their Duties, and to send frequently Parties abroad for Intelligence, and to raise Contribution.

**GRENADIER**, is a Foot

*Soldier* armed with a *Sword*, *Fire-lock*, *Bayonet*, and a *Pouch* to hold his *Grenades*; they are clothed differently from the rest of the *Battalion*, and wear high Caps; each *Regiment* has a *Company* of *Grenadiers*, which takes always the right of the *Battalion*. In *Holland* each *Company* in a *Regiment* has five or six *Grenadiers*, which being drawn out together form a *Company*. The *Grenadiers* are generally the tallest and briskest Fellows, and are always the first upon all Attacks: When there is any appearance of Action, each *Grenadier* carries three *Hand Grenades*. *Horse-Grenadiers*, called by the French *Grenadiers-Volans*, or *Flying-Grenadiers*, are such as are mounted on Horse-back and fight on Foot; their Exercise is the same with the other *Grenadiers*; we had last War a *Regiment* of *Horse-Grenadiers* joined to the *Guards*, but since the Peace they are reduced to one *Troop* consisting of 145 Men.

**GRENADÉ**, is a Shell of Iron filled with fine Powder, which being fired, bursts the Metal in pieces amongst those that are near where it falls, who are obliged to quit their Post, or run the hazard of having their Legs and Arms broke and spoil'd. The *Grenade* has a *Vent* to receive a *Fuse*, which is made of the same Composition with that of a *Bomb*, that the *Grenade* may not break in the Hand of the *Grenadier* before it be delivered.

**GUARD**,



GUARD, is a Duty or Service which ought to be performed with a great deal of Vigilance, to secure all from the Efforts and Surprizes of an Enemy. In a *Garrison* the *Guards* are relieved every day, and it comes to every *Soldiers* turn once in three days, so that they have two nights in Bed, and a third upon *Guard*; to be upon *Guard*, to go upon *Guard*, to mount the *Guard*, to dismount the *Guard*, to relieve the *Guard*, to change the *Guard*, the *Officer* of the *Guard*, or the *Serjeant* of the *Guard*, are Words often used and well known.

*Main-Guard*, is the great *Guard* from whence all the other small *Guards* are detach'd; those which are to mount the *Guard*, meet at the respective *Captain's* Quarters, and are carried from thence to the *Parade*; where, after the whole *Guard* is drawn up, the small *Guards* are detach'd for the *Ports* and *Magazines*, and the Subaltern *Officers* throw Lots for their *Guards*, and are subordinate to the *Captain* of the *Main Guard*. The *Guards* are mounted in *Garrisons* at different hours, according as the *Governour* pleases, but the most usual is at the opening of the *Gates* at ten a Clock, or at two in the Afternoon.

*Advanc'd-Guard*, is the Party of either Horse or Foot that march before a Body, to give them Notice if any Danger appears; when the Army is upon

their March, the *Grand-Guards* that should mount that day, serve as an *Advance Guard* to the Army; if a Body of Foot be marching, their *Advanc'd-Guard* are Foot. In small Parties, 6 or 8 Horse are sufficient; and are not to go above 4 or 500 yards before the Party. An *Advanc'd-Guard* is likewise the small Body of 12 or 16 Horse, under a *Corporal* or *Quarter-Master*, which are posted before the *Grand-Guard* of the *Camp*.

*Rear-Guard*, is that part of the Army which brings up the *Rear*, which is generally the old *Grand-Guards* of the *Camp*. The *Rear-Guard* of a Party, is 6 or 8 Horse that march about 4 or 500 paces behind the Party. The *Advanc'd-Guard* going out upon Party, make the *Rear-Guard* in their return.

*Grand-Guard*, are 3 or 4 *Squadrons* of Horse commanded by a Field Officer posted before the *Camp* on the *Right* and *Left Wing* towards the Enemy, for the security of the *Camp*; this *Guard* mounts every morning about 7 or 8 a Clock; see *Camp*.

*Quarter-Guard*, and *Standard-Guard*, see *Camp*.

*Picquet-Guard*, is a certain number of Horse and Foot which are to keep themselves in a readiness in case of an *Alarm*; the Horse keep their Horses saddled, and are booted all the time, in order to mount in a minute. The Foot draw up at the Head of the *Battalion*, at the beating of



the *Tattou*; but return to their Tents, where they hold themselves in a readiness to march, upon any sudden *Alarm*; this forms a good Body able to make a Resistance, till the Army can be in a readiness.

*Forrage-Guard*, is a Detachment sent out to secure the *Forragers*, and are posted at all places, where either the Enemies Party may come to disturb the *Forragers*, or they may be spread too near the Enemy and be taken; this is likewise called the *Covering Party*, and marches generally the night before the forraging, that they may be posted in the morning before the *Forragers* come; they consist both of Horse and Foot, and must stay at their Posts till the *Forragers* be all come off the Ground.

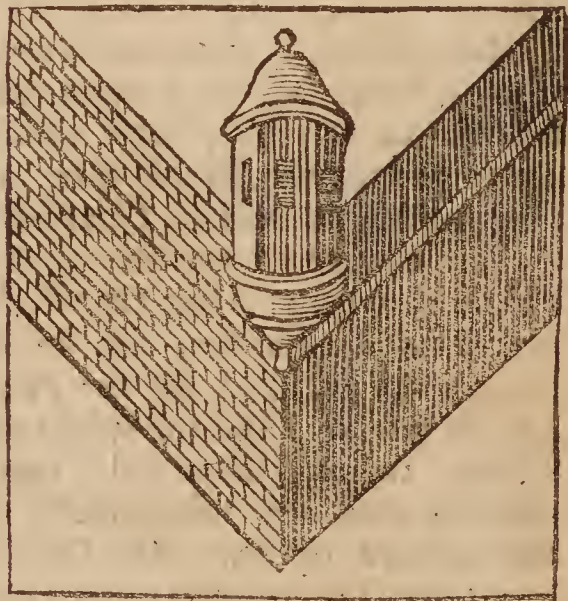
*Artillery-Guard*, is a Detachment from the Army to secure the *Artillery*; their *Corps de Garde* is in the Front, and their *Centries* round the Park; this is a 48 hours *Guard*, and upon a March they go in the Front and Rear of the *Artillery*, and must be sure to leave nothing behind; if a *Gun* or *Waggon* break down, the *Captain* is to leave a part of his *Guard* to assist the *Gunners* and *Matrosses* in getting it up again.

*Corps de Garde*, are *Soldiers* entrusted with the *Guard* of a Post under the command of one or more Officers.

*Guards*; the *Horse-Guards*, are Gentlemen chosen for their Bravery and Fidelity, to be entrusted

with the *Guard* of the *Queen's Body*, divided into three *Troops*, called the *Troops of Guards*; each *Troop* hath a *Colonel*, 2 *Lieutenant-Colonels*, a *Cornet*, a *Guidon*, 4 *Exons*, *Brigadeers*, and *Sub-brigadeers*, and 160 *Private Men*. The *Foot Guards*, are *Regiments* of Foot appointed for the *Guards* of her Majesty and her Palace; there are two *Regiments* of them, called the *First* and *Second Regiments of Guards*, the one having four *Battalions*, and the other two; the *Regiment of Scots Guards* is likewise two *Battalions*.

*GUERITE*, is a sort of



small Tower of Stone or Wood, generally on the Point of a *Bastion*, or on the Angles of the *Shoulder*, to hold a *Centinel*, who is to take care of the *Foss*, and to watch to hinder Surprizes; some call *Echaugette* those which are made of Wood and are of a square form, for the *Guerites* of Stone are roundish, and are built half without the Wall, and terminate



minate at a Point below, which ought to be at the *Cordon*, that the *Centinel* may discover along the *Faces*, *Flanks*, and *Curtins*, and all along the *Foss*: they ought to be about six foot high, and their breadth three and a half.

**GUIDES**; *Captain of the Guides*, is an Officer appointed for providing Guides for the Army, of which he ought to have always a sufficient number with him, that know the Country very well, to send out as occasion requires; such as are to guide the Army on a March, for Convoys, Parties, Baggage, Artillery, and Detachments; to provide which, he ought to have a Party of Horse to go to the Adjacent *Villages*, *Castles* or *Forts*, to demand *Boors*, whom he brings to his Quarters, and keeps under a Guard for fear they make their Escape, till the Army come to another Ground, where he can be provided with others: He ought to understand several Languages, especially that of the Country in which the Army is.

**GUIDON**, is a *French* Term for him that carries the *Standard* in the Guards or *Gens d'Armes*, and signifies likewise the *Standard* itself.

**GUN**, see *Cannon*.

**GUNNER**, is one appointed for the Service of the *Cannon*; he carries a *Field Staff* and a large *Powder-Horn* in a string over his Left Shoulder; he marches by the *Guns*, and when there is any

Apprehension of Danger, his *Field-Staff* is armed with Match, and a Linstock stuck upon his *Gun*, with a light Match; his Business is to lay the *Gun* to pass, and to help to load and to traverse her.

## H.

**HAIR-CLOTHS** are large pieces of Cloth made with half Hair; they are used for covering the Powder in the Wagons, or upon Battery; as likewise for covering fixed *Bombs* or *Hand-Grenades*; and are for several other uses in a *Magazine*.

**HALBARD**, is the Arms carry'd by the Serjeants of Foot and Dragoons; the Head of the *Halbard* ought to be a foot or 15 Inches long; one end ought to be hollow to receive the Staff, but the other broad, ribb'd in the middle, edg'd on both sides, and drawing to a Point, like the point of a two-edged Sword. On one side of the Head is likewise fixed a piece in form of a *Half-moon* or *Star*, and on the other a broad Point of 4 Inches long, crooked a little, which is very commodious for drawing *Fascines*, *Gabions*, or whatever Obstacle else happen in the way. The Staff of the *Halbard* is about five foot long, and an inch and half diameter, made of Ash or other hard Wood. *Halbards* are very useful in determining the Ground betwixt the Ranks, and for dressing the Ranks and Files of a Battalion, and like-



wise for chastising the Soldiers. It is carried on the Left Shoulder.

**HALF-FILES**, see *File*.

**HALF-MOON**, is properly an *Out-work* composed of two *Faces* making a *Salliant Angle*, whose *Gorge* is turned like a *Crescent*, or forming an Arch of a Circle; they were used formerly for covering the points of Bastions; but have been found of no use, because having only the *Ravelins* to defend them, they are but very indifferently flank'd; the *Ravelins* that are built before the *Curtins* are now called *HalfMoons*, the Name of *Ravelin* being almost laid aside by the *Soldiers*.

**HALT**, is to discontinue the March of Troops, either in order to rest, or upon what occasion may happen. The word of Command *Halt* is an Order to stop the March and to stand still.

**HAND-BARROW**, is ordinarily made of hard light Wood, and is of great use in Fortification for carrying Earth from one place to another, and in a Siege for carrying *Bombs* or *Cannon-ball* along the Trenches, and for several other Uses.

*Hand-Screw*, see *Fack*.

*Hand Spike*, is a piece of Ash, Elm, or other strong Wood, five or six foot long, cut thin like an Edge at one End, that it may get the easier betwixt things which are to be separated, or under any thing that is to be raised; it is better than a *Crow* of Iron, be-

cause its Length allows a better poize.

**HATCHET**, is a small *Ax* used by the *Pioneers*, who go before to prepare the ways for an Army, in cutting down *Hedges*, *Bushes*, *Stiles* or *Gates*. The *Grenadeers* carry sometimes each a *Hatchet* by his Side, and the *French Dragoons*, who have but one *Pistol*, have each a *Hatchet* hanging at his Saddle-Bow. on the Right-side.

**HEAD** of a Work, is the *Front* of it, next to the Enemy and farthest from the Place; as the *Front* of a *Horn work* is the Distance between the *Flanked Angles* of the *Demibastions*. The *Head* of a *Double Tenaille* is the *Salliant Angle* in the middle and the two other sides which form the *Re-entring Angles*.

**HEDGE**; to *line a Hedge*, is to plant *Mulquetteers* along it under cover, either to make fire upon an Enemy that is advancing, or to save themselves from the *Horse*, or to defend a *Pass* or *Defile*.

**HEIGHT**, see *Eminence*.

*Height of the Bore of a Piece*, is the Diameter of the Bore.

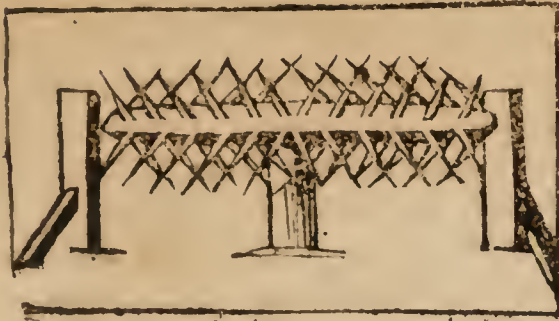
**HELVE**, is the Handle of a *Hatchet*, *Pickax*, *Mattock*, &c. To *helve*, is to put *Handles* to them.

**HEPTAGON**, is a figure capable of being fortified with seven regular *Bastions*.

**HERISSON**, is a *Barriere* made of one strong Beam or Plank of Wood; stuck full of *Iron-spikes*; it is supported in the middle, and turns upon a *Pivot* or *Axis*;



it is used in stopping a passage, in rally and repulse them. See *Orgues*.



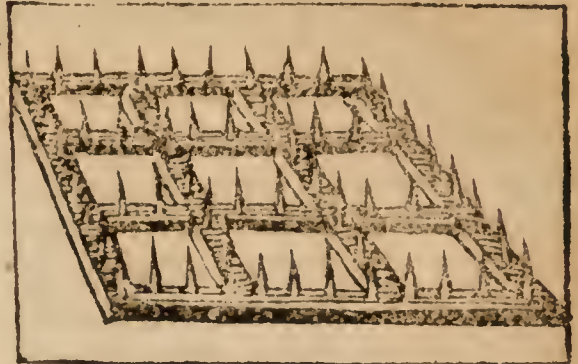
nature of a *Turn-stile*, for it is equally balanced upon the *Pivot*, which stands upright in the middle of the Passage, upon which it turns round, as there is occasion to open or shut the Passage.

HERSES or *Portcullises*, are



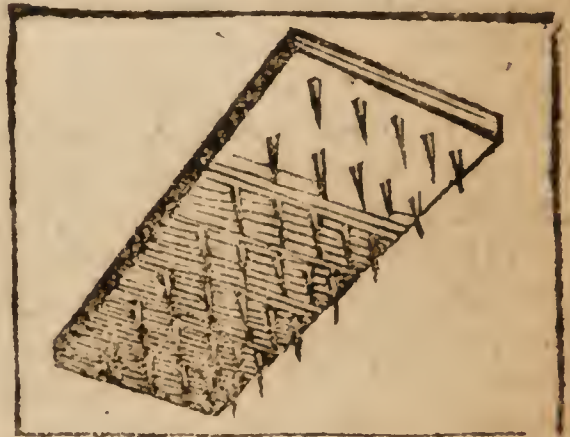
strong pieces of Wood jointed cross-ways like a *Lattice* or *Harrow*, used formerly to hang in the middle of a *Gate-way* of fortified Towns, to be let fall to stop the Passage, in case the Gate had been broke down or *Petarded*. It is either a *Stop* or a *Separation*, if any of the *Enemy* have already enter'd, for before it can be broke open, the *Besieged* have time to

*Herse*, is likewise an Engine like



a *Harrow*, stuck full of *Iron-spikes*; it is used in place of the *Chevaux de Frise*, to throw in the ways where *Horse* or *Foot* are to pass, to hinder their *March*, and upon Breaches to stop the *Foot*. *Common Harrows* are sometimes made use of, and are turned with their *Points* upwards. See the figure.

HERSILLON, is for the



same use, as the *Herse*, and is made of one strong plank of Wood about 10 or 12 foot long, stuck full of *Points* or *Spikes* on both sides, as the figure shews

HEXAGON, is a figure of six sides, capable of being fortified with six *Bastions*.

HIDES, *Tan'd Hides* are always carry'd along with an *Artillery*; espe-

especially in the *Fire-workers* stores for covering Powder or fixed Bombs from the Rain; and are very useful upon a *Battery*, or in a *Laboratory*.

**HOBITS**, are a sort of small *Mortars*, about 8 inches diameter, some 7, some 6; they differ nothing from a *Mortar*, but in their *Carriage*; which is made after the fashion of a *Gun-Carriage*, only much shorter; they march with the *Guns*, and are very good for annoying an Enemy at a distance, with small *Bombs*, which they throw two or three Miles; or in keeping a *Pass*, being loaded with *Cartouches*. See *Cartouch*.

**HOLLOW-SQUARE**, see *Square*.

**HONEY-COMBS**, are flaws and defects in the charged *Cylinder* of a *Cannon*; it is a fault in casting the *Piece*.

**HOOKS** of Iron placed on the *Cheeks* of a *Gun Carriage*, two before and two behind, are called *Draught Hooks*, which see.

**HORISONTAL Superficies**, is a *Superficies* parallel with the *Horizon*, as a plain or level Country or Field without any *Rising-Ground* or *Hollow*.

**HORN-WORK**, is a Work which the *French Engineers* prefer before *Tenailles*, *Swallows Tails* or *Priests-Bonnets*, because it takes in a great deal of Ground and has a better Defence; it is composed of two Long Sides or Faces parallel, the Distance between them being the Length of one *Curtin*; their Length, measuring from the *Angle*

of the *Shoulder*, is the Length of one side of the *Polygon*, or of the *Curtin* and one *Demigorge*. The *Head* or *Front* of this Work is fortified with two *Demibastions* and a *Curtin*. They have sometimes *Flanks* on their long sides, and then they are called *Horn-works* with double *Flanks* or *Shoulders*. They have generally a *Ravelin* in their *Gorge*, and a small *Ravelin* before the *Curtin*. This Work is quite rejected by *Coehorne*, being of too great a Circumference, and so small a Defence, that 'tis not worth the *Mason-work* with which 'tis faced.

**HORSE**, is generally taken for that Body of *Troops* that fight on *Horse-back*, as the *Horse-Guards* and the *Light-Horse*. See *Cavalry*.

*Horse-Shoe*, is a small round or oval Work, with a *Farapet*, made generally in a *Moat* or *Marsh*.

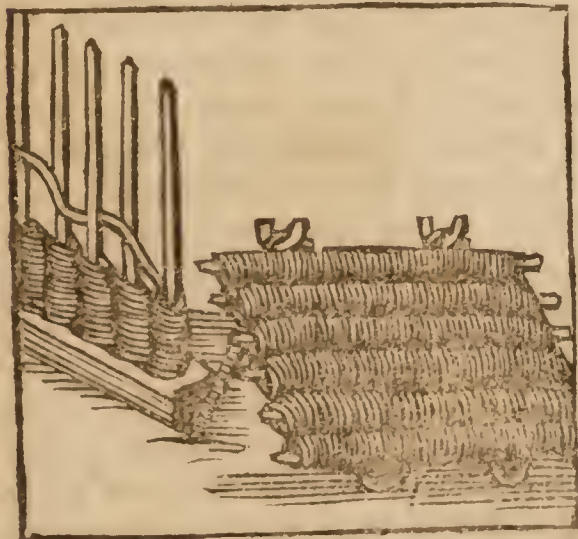
**HOSPITAL**, is a place appointed, at a *Siege* or with the *Army*, for the Sick and Wounded, and ought to be provided with *Physicians*, *Chirurgeons*, *Overseers*, &c. with all sorts of Medicines, Drugs, and whatever else may be wanted, in great Quantities; as likewise *Beds*, *Sheets*, *Coverlets*, *Shirts* and *Spare Linen* for *Bandages*. The Director of an *Hospital* ought to be a very careful and just Man, and to see that the Men want nothing; for there are often great Rogueries committed in an *Hospital*, because they have every thing at command, as the *Wine*, *Brandy*, *Syrups*, *Bread*, *Butter*, &c. which are often misemploy'd.

The



The *Hospital* ought to be furnished with the best *Physicians* and *Surgeons*, that the Life of a Man which he has exposed for the Service of his *Prince*, may not be lost by an Evil Operation of a bad *Surgeon*, when it may be preserved by being well dressed; the *Hospital* is generally settled in some Town near the *Army*, where the *Sick* and *Wounded* may be conveniently carried to it, only a part of it stays with the *Army* and moves with it, and is called the *Flying Hospital*.

HURDLES, or *Clayes*, are



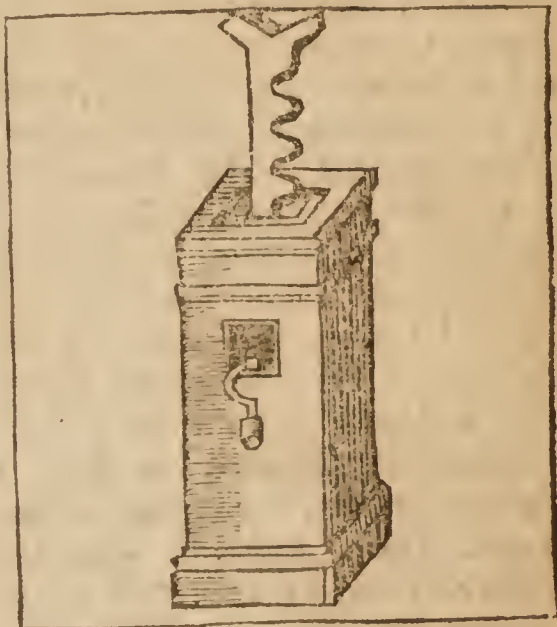
made of Branches or Twigs interwoven together in the figure of a long Square, about five or six foot long, and three or three and a half broad; the closer they are woven they are the better. They are for several uses, as for covering *Traverses* and *Lodgments*, *Caponeers*, *Coffers*, &c. and are covered over with Earth to secure them from the Artificial Fireworks of the Enemy, and from the Stones which might be thrown upon them, and likewise to lay

upon marshy Ground, or to pass the *Foss*, especially when it is full of mud or slime. See their Form in the Figure.

HUTT, see *Cazerne*.

I.

JACK, is an Engine much



used about *Guns* or *Mortars*, and is always carried along with the *Artillery* for raising up the *Carriages*, or supporting the *Axle-tree*, if a *Wheel* chance to be broke; it is likewise used for traversing large *Mortars*, such as those of 18 inches diameter, which are upon *Low Dutch Carriages*, and for elevating them; for traversing the *Sea Mortars*, and many other uses, too tedious to be named: with this Engine, one Man is able to raise more than six could do without it. See the *Figure*.

ICHTHOGRAPHY, as Father *L'Amey* explains it in his *Perspective*,

*pective*, is a *Greek* Word, signifying properly the Figure or Print which the sole of the Foot leaves on the ground, which the *Greeks* call *Ichnos*. Amongst *Architects*, it is the Section of a Building cut horizontally near the Ground. 'Tis likewise what we call a *Plan*: So the *Plan* or *Ichnography* of a *Church*, is the Mark left by this *Church*, if it were razed; or the first appearance in Building, when the Foundation is ready to appear above ground. The *Ichnography* of a *Cube*, or gaming *Dys*, is a *Square*; and that of a right *Cylinder*, is a *Circle*. See *Plan*.

**INCAMP**; To *Incamp*, is the pitching of *Tents* when the Army after a March is come to a place where it is designed to stay a night or longer; the *Serjeants Tents* in the *Foot*, and the *Quarter-Masters of Horse*, are the first of the *Company* or *Troop*; the *Officers* incamp in the *Rear*, the *Subalterns* in one *Line* next the *Company* fronting from it, the *Captains* in another *Line* at some distance, each behind his own *Company* fronting the *Subalterns*; the *Field Officers* behind them, the *Colonel* in the *Centre*, the *Lieutenant-Colonel* on his *Right*, the *Major* on his *Left*, and the *Sutlers* behind all. Each *Company* makes a *Line* in *File*, having an Allowance of 7 foot for a *Tent*, and 2 foot distance; the *Tents* of two *Companies* front one another, leaving a *Street* of five or six yards betwixt them. The *Troops of Horse* incamp the same way,

only the distance between the *Tents* is about 3 or 4 yards for the *Forrage*, and the space between two *Troopers*, is 14 or 15 yards for the *Stables*: At two yards distance from the *Doors* of their *Tents*, is a *Rope* called the *Picquet Rope*, stretched upon pointed *Stakes*, to which their *Horses* are tied. For the *Ground* allowed a *Battalion* or *Squadron*, see *Camp*.

**INCAMPMENT**, see *Camp*.

**INDENTED-LINE**, is a *Line* running out and in, like the *Teeth* of a *Saw*, forming several *Angles*, so that one side defends another; they are used on the banks of *Rivers* where they enter a *Town*, likewise the *Parapet* of the *Covert Way* is often indented. This is by the *French Engineers* called *Redents*; small *Places* are sometimes fortify'd with such a *Line*, but the fault of such *Fortifications*, is that the *Besiegers* from one *Battery* may ruin both the sides of the *Tenaille* or *Front* of a *Place*, and make an *Assault*, without fear of being enfiladed, since the *Defences* are ruined.

**INDEPENDANT Troop** or *Company*, is what is not incorporated into any *Regiment*.

**INFANTRY**, are the *Regiments* or *Independant Companies* of *Foot* in an *Army*; they are formed into *Brigades*, as the *Cavalry* are; each *Brigade* consisting of 4, 5, or 6 *Battalions*; the *Regiments of Foot Guards* take the *Post* of all the *Infantry* in the *Army*; the other *Regiments* take *Post* by

Seni-



Seniority; the oldest *Regiment of Arms, Batteries and Lodgments*, takes the Right of the first *Brigade*; the second takes the Right of the second *Brigade*; the third of the third, and so on. The next in Seniority take the Left of the *Brigades*, and leave the Centers for the youngest *Regiments*. The first *Brigade* takes the Right in the first *Line*, and the second *Brigade* the Right of the second *Line*; the third and fourth the Left of the two *Lines*, and the youngest *Brigades* in the Centre.

ENGINEER, is an able expert Man, who, by the help of *Geometry*, delineates upon Paper or marks upon the Ground, all sorts of Forts and other Works proper for Offence or Defence; who understands the Art of *Fortification*, and cannot only discover the Defects of a Place, but find a proper Remedy for them; and who knows both how to make an Attack, and how to defend a Place. *Engineers* are extremely necessary for both these, and ought to be not only Ingenious, but brave in proportion to their Knowledge, for the Employ requires Men expert and bold. At a Siege, when the *Engineers* have observ'd and narrowly view'd the Place, they are to acquaint the *General* which they judge the weakest part, and where the Approaches may be made with most Ease. Their Business is to delineate the Lines of *Circumvallation* and *Centrevallation*, taking all the Advantages of the Ground; to mark out the *Trenches, Places*

taking great care that none of their Works be flanked or discover'd from the Place. They are to make a faithful Report to the *General* of what is doing, to demand a sufficient number of Work-men and Utensils, and to foresee whatever is necessary, that there be good Provision made of *Fascines, Picquets, Gabions, Spades, Shovels, Pick-axes, Hatchets, Sandbags, Planks, Boards, Mallets, Stampers, Dossers, Wheel-barrow, &c.* An *Engineer* ought to be very perfect in *Arithmetick*, to project the Plots of Places, and calculate the Expences of a Siege; in *Geometry*, to measure his Works and raise Plans; in *Military Architecture*, to distinguish himself in his Profession; in *Civil Architecture*, to know how to construct Buildings and Works of Places; in *Mechanicks*, to know how to make Sluices, march Cannon, and use all sorts of *Machines*; in *Perspective*, to know how to express his Works on Paper, in their just Proportion; and without *Design*, he can neither make *Carts* nor *Plans*. These Sciences are called the *Genius*, in which consists the whole Spirit of *War* and *Fortification*.

INSULT, is the attacking a Post with open Force, without using *Trenches, Saps*, or any Approaches, but coming without Shelter to Blows with the Enemy. The Besiegers generally insult the *Counterscarp* to shun the Enemies *Mines*, that they may have pre-

prepar'd) by not giving them time to Fire them. In such Attacks, the *Grenadiers* march before the rest of the *Troops*, and the *Work-men* go prepar'd to made a *Lodgment*. In the year 1695, when our *Approaches* were advanced within 150 yards of the *Covert Way* before the *Ravelin*, which cover'd *St. Nicolas Gate* at *Namure*, the King gave Orders to insult the *Counterscarp* about 4 a Clock in the Afternoon, which was done with that Bravery, that we lodged upon the *Parapet* of the *Covert-Way*.

**INTRENCH'D**; an *Army* is said to be *intrench'd*, when they have raised Works before them to fortifie themselves against the *Enemy*, that they may not be forced to fight at a Disadvantage. It was a chief Maxim amongst the *Romans*, that in their most hasty Marches they *intrench'd* every night.

**INTRENCHMENTS**, are all sorts of Works made to fortifie a Post against an *Enemy*. The Word signifies a *Foss* or *Trench*, with a *Parapet*, or Rows of *Fascines* loaded with *Earth*, *Gabions*, *Sand bags*, or *Hogsheads* filled with *Earth*, to cover the Men from the *Enemies* Fire. A *Post* *intrench'd*, is when it is cover'd with a *Foss* and *Parapet*. See *Retrenchment*.

**INVALIDE**, is a Man who

has spent his time in the Wars, and is either through Age, or by reason of his Wounds, render'd incapable of the Service. They are disposed of in *Hospitals*, such as *Chelsey* for the Land Forces, and *Greenwich* for the Sea-men; and are there provided with Meat, Drink and Cloaths, and are allowed a little Money besides.

**INVESTING a Place**, is when a *General* having a Design to besiege it detaches a Body of *Horse* to sieze all the *Avenues*, blocking up the *Garrison*, and preventing Relief getting into the Place, till the *Army* and the *Artillery* are got up to form the Siege. In the year 1695, when the King to amuse the *Enemy*, march'd his *Army* towards the *French* Lines before *Ypres*, and made a Sham Siege of *Knoque*; by which means he drew the *Marshal* of *Villeroy*, with the *Grand Army* of France to oppose him; he order'd the Count *Tserclais de Tilly*, *Velt-Marshal* of the *Elector* of *Cologne*, who lay with a Body of *Horse* to cover *Liege* and *Maestricht*, to invest *Namure* on the North side of the *Maes*, while *General Flemming* did the same on the South side, till our *Army* got up and formed that Famous Siege, which lasted two months after the *Trenches* were opened.

**ISOSCELES**, see *Triangle*.



## K.

**KETTLE**, is a Term the *Dutch* give to a Battery of *Mortars*, because it is sunk under ground. See *Batt. y.*

**KETTLE-DRUMMER**, is a Man on Horse back appointed to beat the *Kettle-Drums*, from which he takes his Name. He ought to be a Man of Courage, and of a good Meen, having a neat Motion with his Arms, and a good Ear; he marches always at the Head of the *Squadron*, and his post is on the Right when the *Squadron* is drawn up.

*Kettle-Drums*, are two sorts of large Basins of *Copper* or *Brass*, rounded in the bottom, and covered over with Vellum or Goat-skin, which is kept fast by a Circle of Iron, and several Holes fasten'd to the body of the *Drum*, and a like number of Screws to screw up and down, with a Key for the Purpose. The two *Drums* are kept fast together by two straps of Leather which go thro' two Rings which are fasten'd the one before, and the other behind the pomel of the *Kettle-Drummer's* Saddle; they have each a Banner of Silk or Damask richly embroider'd with the *Sovereigns* Arms, or those of the *Colonel*, and are fringed with Silver or Gold, and to preserve them in bad Weather, they have each a cover of Leather. The *Drum Sticks* are of Crab-Tree or other hard Wood, of 8 or 9 inches long, with two

knobs on the ends, which beat the *Drum* head and cause the sound. The *Kettle-Drum* with *Trumpets*, is the most Martial Sound of any; each *Regiment* of *Horse* has a pair, and of late the *Dragoons* have likewise *Kettle-Drums*. The Train of *Artillery* have a very large pair on a *Chariot* drawn by two white Horses.

**KLINKETS**, are a sort of small Gates made through *Palisades* for Sallies.

## L.

**LABORATORY**, or *Laboratorium*, is any sort of Work-House; but we bring it in here as a Term belonging to *Gunnery*, and it signifies the Place where the *Fire-workers* and *Bombardeers* prepare their Stores; such as driving of *Fusees*, fixing of *Shells*, making of *Quick-match*, fixing *Carcasses*, and all other Fireworks belonging to War or Recreation. There is sometimes a large Tent carried along with the *Artillery* to the Field for this Use, with all sorts of Tools and Materials, and it is call'd the *Laboratory Tent*.

**LADLE** of a *Gun*, is the Instrument wherewith the Powder is put into the Piece; it is made of a plate of *Copper* bowed in form of a half *Cylinder*, rounded at one end, the other being fixed upon a long Staff; this filled with Powder, the *Gunner* carries with his Left Hand under the end of it to keep the Powder from falling out, till he enters it

in the Muzzle of the Piece ; when he has carried the Powder home to the charged *Cylinder*, he turns the *Ladle* that the Powder may fall out, and withdraws it. *Ladles* are fitted to the Bore of each *Gun*, and hold Powder sufficient for the Charge.

LANE; to make a Lane, is to draw Men up in two Ranks facing one another, which is generally done in the Streets through which a great Person is to pass, as a Mark of Honour. But oftentimes Men are drawn up so for a *Soldier* to run the *Gauntlet*, each having a small Wand or Swith in his hand to whip the Offender as he passes.

LANSPESADE, or *Anspesade*, is under a *Corporal*, and assists him in his Duty, and performs his Duty in his absence; they are generally the most vigilant and brave of the Company, they have the same Pay as a Foot *Soldier*, but in France they have a greater Allowance; they are excused from Common Duty, they teach the new *Soldiers* their Exercise, and post the *Centries*; their Place on a March is on the Right of the second Rank.

LANTHORNS are used at Sieges for the night time upon the *Batteries*, but these are your *Blind* or *Dark-Lanthorns*. They have always a great Provision of them in all the Store-Houses.

LEADERS, see *File-Leaders*.

LIEUTENANT of Horse or Foot, is the second Officer in the

*Troop* or *Company*, and ought to be a very Intelligent Person, because in the absence of the Captain he commands and therefore he ought to be as well qualified as the *Captain*; when the *Company* is at Arms, he takes the Left of the *Captain*, but the Right, if the *Ensign* be there. He marches the *Company* in the absence of the *Captain*, but when the *Captain* is present, his Post is in the *Rear*; when the *Battalion* marches in Line of *Battel*, the *Lieutenants* take their Posts at the Head of the Divisions, according to their Seniority. He ought to inspect the Actions of the *Serjeants* and *Corporals*, to keep them to their Duty, and take care of every thing that is necessary to the *Company* to see them Exercise, to cause them keep their Arms clean and fit for Service, and to see that the *Soldiers* be provided of Powder and Ball.

*Lieutenant Colonel*, is the second Officer in a *Regiment*, and should be one who has signaliz'd himself by some brave Action; a Man of great Experience; knowing how to attack or defend a *Post*, lead the *Regiment* to *Battel*, and how to make a good Retreat; he is to see the *Regiment* kept to their Exercise, and is to know the Qualifications of all the Officers of the *Regiment*. In the absence of the *Colonel* he commands the *Regiment*; his Post is on the *Colonel's* Left Hand, three paces before the *Captains*, when there is but one *Battalion*; but if the *Regiment* be



of two, the *Colonel* commands the first; and he the second. *Colonels* and *Lieutenant-Colonels*, are excused from mounting the Guard when the *Regiment* is in Garrison.

*Lieutenant-Colonel of Horse*, is the same; he marches at the Head of the second *Squadron*.

*Lieutenant-General*, is a Charge of great consequence, requires Persons of Courage and Conduct, and whose Ability and Fidelity has appeared on several Occasions: They ought not only to understand their own, but also the Business of a *General*, because they are often intrusted with the Command of a *Flying-Camp*, and sometimes with a part of the *Army*. The number of *Lieutenant-Generals* is not limited; they are more or less, according as the *Army* is great or small: there is every day a *Lieutenant-General* upon Command, who is called the *Lieutenant-General of the Day*. In Day of Battel, they command the *Wings* of the *Army*; and at a Siege, they command in the *Trenches* by turns. They are to execute the *Generals* Orders upon all Occasions: some are appointed over the *Cavalry*, others for the *Infantry*; sometimes on the *Advance-Guard*, others on the *Rear-Guard*, and sometimes they command a *Flying-Army*. They ought to be daily with the *General* to know his Orders; they are allowed each two *Aid de Camps*, and a *Foot Guard* mounted by a *Subaltern*, with a *Serjeant* and 30 Men.

LIFE-GUARD, see *Guards*.

LIGHT-HORSE; all the *Regiments of Horse*, except the *Guards*, are called the *Light-Horse*; each *Regiment* consists of six *Troops* (only *Lumley's* has nine) and is commanded by a *Colonel*, *Lieutenant-Colonel*, *Major*, *Captains*, *Lieutenants*, *Cornets*, and *Quarter-Masters*; they rank according to Seniority. See *Regiment* and *Troop*.

LIMBERS, is a sort of advance'd Train joined to the Carriage of a *Cannon* upon a March; it is composed of two Shafts wide enough to receive a Horse betwixt them, which is called the *Fillet-Horse*; these Shafts are jointed by two bars of Wood; and a bolt of Iron at one end, and have a pair of small Wheels; upon the *Axletree* rises a strong Iron Spike, upon which the Train of the *Carriage* is put upon a March, but when a *Gun* is upon Action; the *Limbers* are run out behind her.

LINE, as it is a Term in *Geometry*, is a length without breadth, whose Extremities are Points.

*Line of an Army*, see *Camp*.

*Line in Fortification*, is sometimes applied to a *Trench*. *Line of Gabions*, *Lines of Communication*, *Circumvallation*, *Contrevallation*, and *Lines of Approaches*, are already explained. To run a *Line*, is to dig a *Trench* with a *Parapet*; to line a *Work*, is to trace it out; to line a *Work*, is likewise to face it with Brick or Stone. *Lines* are sometimes made to cover a Country,



try, as the *French Lines* in the late War, which run from *Dunkirk* by *Ypres*, *Menin*, *Courtray*, *Lisle*, and ended at the *Scheld* near *Tournay*; they were fortified from distance to distance, with small *Forts*; these were forced by the Duke of *Wirtemberg*, in the year 1693, near *Pont Espiere*. The *French* in the beginning of this War, made a *Line* from the *Scheld* below *Antwerp* to cover that Place and all *Brabant*, which passes by *Leer*, *Ar-schot*, and *Leuwe*, to the *Mehaigne*, three Leagues above *Huy*.

*Line-Capital*, see *Capital*.

*Line of Defence*, is a supposed *Line* drawn from the *Angle* of the *Curtin*, or from any other Point in the *Curtin*, to the *Flanked Angle* of the opposite *Bastion*; or it is a *Line* representing the flight of a *Musquet Ball* from the place where the *Musqueteers* stand to scowr the *Face* of the *Bastion*, and ought never to exceed the reach of a *Musquet*. It is either *Fichant* or *Raxant*; the *first* is when it is drawn from the *Angle* of the *Curtin* to the *Flanked Angle*, which ought never to exceed 800 foot; the *last* when it is drawn from a Point in the *Curtin*, razing the *Face* of the *Bastion*; this *Line* shows how much of the *Curtin* is taken off fort he second *Flank*: it is called likewise the *Flanking* or *Stringent-Line*.

To *line Hedges*, see *Hedges*.

*LINSPINS*, are small pins of Iron which keeps the *Wheel* of a *Cannon* or *Waggon* on the *Axle-tree*, for when the end of the

*Axle-tree* is put through the *Nave*, the *Linspin* is put in to keep the *Wheel* from falling off.

*LINSTOCK*, is a short Staff of Wood about three foot long, upon one end of which is a piece of Iron which divides in two turning from one another, having each a place to receive Match, and a Screw to keep it fast; the other end is pointed and shod with Iron to stick in the Ground. It is used by *Gunners* to fire the *Guns*; and failing of it, a piece of cleft Stick to stick the Match in, does the Business every jot as well.

*LIZIERE*; *Berm*, *Foreland*, or *Relais*, is a space of Ground left at the Foot of the *Rampart*, on the side next the Country, design'd to receive the Ruins of the *Rampart*, to prevent its filling up the *Foss*; it is sometimes palisaded for the more security, and in *Holland* is planted generally with a *Quickset-Hedge*; when this space is covered with a *Parapet*, it is called a *Fausebray*, or *Low Wall*.

*LOCKSPIT*, is the small Cut or Trench made with a *Spade* of about a foot wide, to mark out the first *Lines* of a Work.

*LODGMENT*, is a Work raised with *Earth*, *Gabions*, *Fascines*, *Wool-packs*, or *Mantelets*, to cover the *Besiegers* from the *Enemies Fire*. In conducting the *Approaches* at certain Distances, are made *Lodgments* or *Places of Arms* to flank the *Trenches*, capable of holding 100 Men, which



which serve as a guard to the *Trenches*. But *Lodgments* made on the *Glacis*, *Covert Way*, *Breach*, &c. are much more dangerous, being more exposed to the Enemies Fire, and having less Earth. When it is resolved upon to assault the *Covert Way*, tho' a great many Men are lost, and generally the bravest; there must be great Provision made of *Fascines*, *Sand-bags*, &c. in the *Trenches*; and during the Action, the *Pioneers* with *Mantelets*, *Fascines*, *Wool-packs*, or *Sand-bags*, should be making the *Lodgment*; covering themselves as advantageously as possible from the opposite *Bastion*, or the Place most to be feared.

LOZANGE, or *Rhomb*, is a Figure of four equal sides whose *Angles* are two Acute, and two Obtuse.

LUNETTE, is a small Work raised sometimes in the middle of the *Foss* before the *Curtin*, forming an *Angle*; its *Terreplein* rising but a little above the *Surface* of the *Water*, about 12 foot broad, with a *Parapet* of 18 foot.

There is another sort of *Lunettes* which are larger, and raised to cover the *Faces* of a *Half Moon*; they are likewise composed of two *Faces*, a longer and a shorter; see their Figure in the general *Plan*.

M.

MACHINE, is a heap of several pieces joined together,

and so disposed, as to serve both for augmenting or diminishing the Force whereby a Body is moved, according to the different Uses to which it is applied in *War*, *Architecture*, and other *Arts*. *Machines* are either *Simple* or *Composed*; the *Simple* are the *Balance*, *Crow*, *Pully*, *Wheel*, *Coin* and *Screw*; to which some add the *Inclining Plan*, and the plain *Surface*.

*Machines Composed*, are those which are composed of several *Simple Machines*, which cannot be numbred, because in their Construction, the *Simple Machines* may be used a great many different ways.

MADRISERS, are long planks of Wood very broad, used for supporting the Earth in mining, in carrying on a *Sap*, in making *Coffers*, *Caponiers*, *Galleries*, and many other Uses at a Siege. They are likewise used to cover the mouth of *Petards* after they are loaded, and are fixed with the *Petards* to the *Gates*, or other places design'd to be forced open; when the Planks are not strong enough, they are doubled with plates of Iron.

MAGAZINE or *Arsenal*, is the Place where all sorts of Stores are kept, where *Guns* are founded, and where the *Carpenters*, *Wheelwrights*, *Smiths*, *Turners*, and other Handicrafts, are constantly employed in making all things belonging to an *Artillery*, as *Carriages*, *Waggons*, *Tumbrills*, &c. The place ought to be large,

that every thing may be conveniently disposed without Confusion; the Powder by it self in a dry place, otherwise the Saltpetre grows moist and damp. The *Corselets, Breast-Plates, Hel-mets, Pikes, Halberts, Musquets, Carabines, Pistols, Swords, Bago-nets, &c.* in order; the *Cords, Ropes, Match, Brass, Tin, Lead,* and all other things belonging either to the Attack or Defence of a Place, ought to be in parti-cular places. Fixed *Bombs, Gre-nades, Petards, &c.* must be in dry Places; *Cannon Ball,* empty *Bombs* and *Grenades,* may be piled up in the Court, or in places made on purpose, with a small Wall betwixt the *Balls* of diffe-rent Calibers. The *Carriages, Wheels, Limbers, Waggon,* and *Tumbrils* must be in Shades, to save their being spoiled or rotted by the Rain or Snow. The *Fire-workers* Stores must be allowed a Place and a *Laboratory* by them-selves. A *Magazine* being the Place appointed for making and keeping all sorts of War-like Stores, ought to be well situated in a strong place, and wellguard-ed.

**MAIN-BODY** of the Army, is the *Body of Troops* that marches between the *Advance* and the *Rear-Guard.* In a *Camp,* it is that part of the Army which is encamped betwixt the *Right* and *Left Wing.*

*Main-Guard,* or *Grand-Guard,* is a *Body of Horse* posted before the *Camp,* for the safety of the Army.

In Garrison, it is that *Guard* to which all the rest are subordi-nate; see *Guard.*

**MAJOR** of a *Regiment of Horse* or *Foot,* is the next Officer to the *Lieutenant-Colonel,* and is generally made from eldest *Captain;* he ought to be a very careful vigilant Man; he is to take care that the *Regiment* be well exercised, that they be drawn up in good Order at a *Review* or upon the *Parade,* or any other Occasion; to see it march in good Order, and to rally it, in case of its being broke. He is the only Officer among the *Foot* that is allowed to be on Horse-back in time of Action, that he may be the readier to execute the *Colonels* Orders, either in ad-vancing or drawing off the *Regi-ment:* He is appointed an *Aid-Major,* or *Adjutant* for his Assi-stant.

*Major of a Brigade,* see *Brigade-Major.*

*Major-General,* is a Post of great Consequence, and he who pos-sesses it, ought to be brave, judi-cious, and a Man of Experience in marching and encamping of *Troops;* he is the next Officer to the *Lieutenant-General;* when there are two Attacks at a Siege, he commands that on the Left. His chief Business is to receive the Orders every night from the *Ge-neral,* or in his absence, from the *Lieutenant-General of the Day,* which he is to distribute to the *Brigade-Majors,* with whom he is to regulate the *Guards, Convoys, Parties* and *Detachments,* and ap-  
points



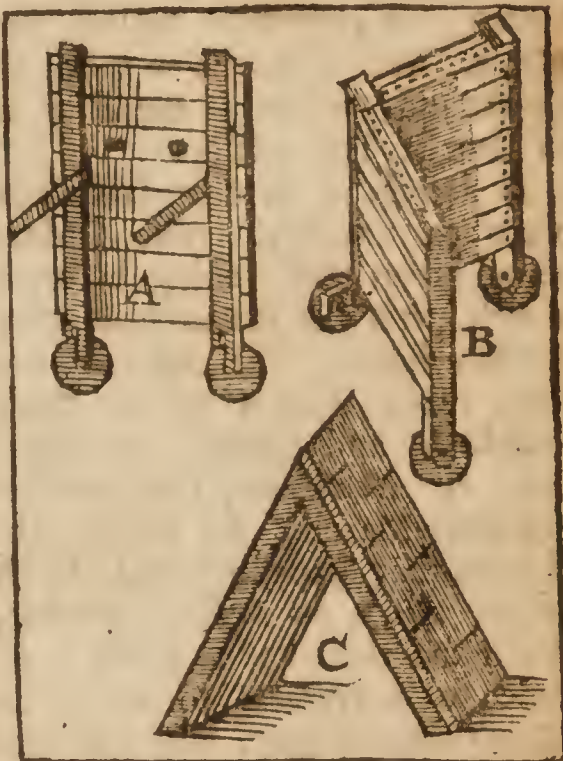
points the place and hour of their Rendezvous. He is to know the Strength of each *Brigade* in general, and of each *Regiment* in particular, and to have a List of all the *Field Officers*. Finally, he is in the *Army*, the same as the *Major* of a *Regiment* in the *Regiment*: He is allowed an *Aid de Camp*, and has a *Serjeant* and 15 Men for his *Guard*.

*Town-Major*, is the third Officer in a Garrison; his Business is to see the *Guards* mounted, the *Rounds* and *Posts* assign'd; he regulates the *Centinels*, goes every evening to receive the Word from the *Governour*, and gives it out upon the Place of *Arms*, to the *Adjutants* and *Serjeants* of the Garrison; he goes his *Round Major*, visits the *Corps de Gardes*, and sees that all the *Soldiers Arms* are fixed and in good Order; he causes necessary Ammunition to be distributed among them, orders the *Gates* to be open'd and shut, and gives the *Governour* an Account of all that passes in the Place.

**MALLET** is so well known it needs no Description; its use in *Fortification* is for driving in the *Stakes* or *Piquets* that fasten the *Fascines* or *Gazons*; it is likewise used at *Sieges*, both upon the *Batteries* and in the *Trenches*, on several Occasions.

**MANTELETS**, are great planks of Wood of about five foot high, and three inches thick, which serve at a *Siege* to cover the Men from the Enemies

Fire, being pushed forward on small *Trucks*; they are of two sorts, either single or double. Single *Mantelets A*, are made in joining two or three such planks together with bars of Iron, to make three foot or three and a



half broad, to cover those that carry them from the Enemies Fire. Double *Mantelets, B*, are made by putting Earth between two such rows of Planks, and are used in making *Approaches* and *Batteries* near the Place, as the others are in making *Lodgments* on the *Counterscarp*; they are covered with Letten, and are then made smaller at bottom than at the top, that they may be the more easily join'd together, to cover the *Soldiers* from the *Grenades* and *Fireworks* of the Place, as C. Some are so made, as to cover the *Soldiers* from the



Fire on *Front* or in *Flank*, as B.

**MARCH**, in general, is the steps made in marching, or the moving of a Body of Men from one place to another. *The Beat of the Drum*, when the *Soldiers* are upon march, or beginning to march, is likewise called *the March*. It is likewise a word of Command, when a *Battalion* is to alter its Disposition.

*To March*, is to move from one place to another. The Orders being given the evening before a March, that the *Drums* beat at a certain hour, the *Soldiers* are then ready drawn up at their *Standards* and *Colours*, in *Squadrons* or *Battalions*, ready to begin their March. As many Accidents may happen in the March of an *Army*, as *Defiles*, *Marshes*, *Woods* and the like, it is the Prudence of a *General* to order his March accordingly, and to take care that the *Columns* of his *Army* have a free Communication one with the other. The *March* of an *Army* is composed of an *Advance-Guard*, the *Main-Body*, and the *Rear-Guard*, and is sometimes in two, four, six or eight *Columns*, according as the *Ground* will allow.

**MARSH**, is a standing Water, or Water mixed with Earth, whose bottom is very dirty, which dries up and diminishes very much in the Summer.

**MARSHAL** of *France*, is the highest Preferment in the *Army* or in the *Fleet*: it is the same with *Captain-General*; when two

or more *Marshals* are in one *Army*, the eldest Commands.

*Velt-Marshal* in *Germany*, *Brandenburg*, *Holland*, &c. is likewise the same with *Captain-General*.

*Marshal de Camp*, is in *France* the next Officer to the *Lieutenant-General*, and is the same as a *Major-General* with us. See *Major-General*.

*Marshal de Bataille*, was once a Post in the *French Armies*, but now is suppressed.

**MASTER DE CAMP** in *France*, is he who commands a *Regiment of Horse*, being the same as a *Colonel of Horse*.

*Master de Camp General*, is likewise a Post in *France*, being the second Officer over all the *Light-Horse*, and commands in the absence of the *Colonel-General*.

*Master-Gunner*, is an Officer who has the command over all the *Gunners* in the Kingdom, and is subordinate to the Principal Officers of her Majesty's Ordnance. Each Garrison has likewise a *Master Gunner*, who commands the other *Gunners*.

*Master-General of the Ordnance*, see *General*.

**MATCH**, a small Rope or Twist about three quarters of an inch diameter twisted hard, which being lighted at one end, burns leisurely without going out; it was formerly used for *Matchlock Musquets*, but these are now out of use; it is now used for firing the *Cannon*, *Mortars*, *Hand Grenades*, &c. it is sometimes used in blowing up *Mines*, when it is to be done



done some hours after; the Match being cut according to Judgment to burn six, eight or ten hours, at the end of which time the Match being burned out, fires the Powder and springs the Mine; the hardest and driest Match is generally the best.

**MATROSSES**, are *Soldiers* in the *Artillery* next to a *Gunner*; their Business is to assist the *Gunners* about the *Gun*, to *Traverse*, *Sponge* and *Fire*, to assist him in *Loading*, &c. they carry *Firelocks*, and march along with the *Store Waggon*s, both as a *Guard*, and to help in case a *Waggon* should break down.

**MAXIMS**, are certain Propositions, so clear in themselves, that they cannot be denied, without going against Sense and Natural Reason; they are generally serviceable in all manner of Demonstrations, and deserve to be establish'd as Infallible.

*Maxims* in *Fortification*, are certain general Rules establish'd by *Engineers*, founded on Reason and Experience, which being exactly observed, a Place fortified according as they direct, will be in a good Posture of Defence. The chiefest *Maxims* are,

1. *There ought to be no part in the Fortification of a place, but what is discovered and flanked by the Besieged.* For if there be any part of a Place which is not well flanked, the Enemy being there under cover, will with the more ease attack it in that place, and carry it.

2. *A Fortress should command all the Country round it; that the Besiegers may not cover themselves; nor find places to favour their Approaches and Attacks, nor to overlook the Works of the Place; to batter them with more Advantage.*

3. *The Works furthest distant from the Centre of the Place, must be still lowest, and commanded by those that are nearer; to the end, they may be defended by the higher Works, and those nearer the Place; that so the Enemy by being exposed, may be obliged to quit them, after they have been possess'd of them, because of the Fire of the Besieged; and likewise, that the Enemy by being Masters of such Works, may not overlook the Works of the Place.*

4. *The Flanked Angle, or Point of the Bastion, ought to be at least 70 Degrees; that it may the better resist the force of the Enemies Batteries, in case they designed to beat it down to lodge there.*

5. *The Acute Flanked Angle near to a Right Angle, is preferable to all other.* It is certain, if the *Flanked Angle* be a *Right Angle*, it has all the Strength can be given it, having Solidity enough to withstand the *Enemies Batteries*: but an *Angle* near to a *Right*, makes the *Tenaille* of the Place more compact, by the *Angle* of the *Shoulders* shortening and bettering the Defence, and by its not exposing the *Face* so much to the Enemy. So that it follows of



consequence, that an *Obtuse Angle* is very deficient.

6. *The shortest Faces are the best*; because the longer they are the weaker, for the Enemy attacks them with a greater Front.

7. *The Flank must have some part under cover*; which signifies it must be cover'd by an *Orillon*, otherwise the Defence is presently ruined, and the Lodgment no sooner made on the *Counterscarp*, but the Place is obliged to capitulate, as has been often seen.

8. *There must be an Accord between these Maxims, to render the Fortification perfect.* For if the *Gorge* be too large, the *Face* suffers; the more the *Flank* is covered, the less it is subject to be ruined, but then the Defence is more oblique: in making a second *Flank*, the *Flanked Angle* is made too weak: in discovering the *Face*, the Defence is more easie, but it is more exposed to the Enemies *Batteries*. In a word, there is Advantages and Disadvantages over all; and the Secret consists in judging whether conforming with one *Maxim* be more Advantageous, than disagreeing with another.

MEASURE-ANGLE, is an Instrument of Brass for measuring *Angles*, either *Saillant* or *Reentrant*, to know exactly the number of Degrees and Minutes, to lay them out upon Paper.

MECHANICKS, is a Science very useful in War, especially about an *Artillery*, as teaching a commodious way of moving heavy

Bodies by the help of *Machines*.

MERLON, is that part of the *Parapet* which is terminated by two *Embrasures* of a *Battery*, so that its height and thickness is the same with that of the *Parapet*, but its breadth is ordinarily nine foot on the inside, and six on the outside. It serves to cover those on the *Battery* from the Enemy: and is better of Earth, well beat and close, than of Stone, because these fly about and wound those they should defend.

MILE, is a sort of Measure which is longer or shorter in different Countries; an *Italian Mile* is 1000 Geometrical Paces; an *English Mile* 1250, in *Scotland* and *Ireland* it is 1500, and in *Germany* 4000.

MILITARY-EXECUTION, is the ravaging and destroying a Country for Contribution.

MINE, is an Overture made in a Wall or other place, which is design'd to be blown up with Powder, it is composed of a *Gallery* and a *Chamber*. The *Gallery* is the first Passage made under ground, being no higher nor broader than to suffer a Man to work on his Knees. The *Chamber* is the small space at the end of the *Gallery*, like a small *Chamber* where the Barrels of Powder are deposited, for blowing up what is proposed to be sprung. When the *Chamber* is dry, the Powder is put in Sacks instead of Barrels, and the form of the *Chamber* is cubical; its height and



and depth being about six foot. When the *Mine* is under the *Rampart* of an empty *Bastion*, least by the thinness of the Earth on the side next the Place, the Powder should burst forth that way; the top of the *Chamber* is cut into to *Passages* like *Chimneys*, to oblige the *Mine* to have its Effect upwards. If the *Chamber* be humide or damp, the Powder is put into *Barrels* or *Caissons*, and fired with a *Sauciss*. If the Places to be blown up be rocky, or if there happen to be any thing else in the way to hinder the *Miners*, they make *Fourneaux*, *Arraignée*, or *Rameaux*, all which are the same thing, and signifie *Branches*, which terminate in small *Mines*, and are fired all together by several *Saucisses*. The *Gallery* of a *Mine* goes turning and winding, the Earth is put in small *Baskets*, and given out betwixt their Legs backwards from one to another, because of the narrowness of the *Passage*. The Earth of the *Chamber* is to be supported, with planks, and when the *Chamber* is damp, it must be floor'd with Boards.

**MINER**, is he that works in the *Mine*; he covers his Head with a *Hood*, to save his Eyes from the Earth that falls down, which by this *Hood* is thrown over his Shoulders.

**MINION**, is a Piece of *Canon* carrying a Ball of 4 pound weight, the diameter of its Bore is 3 inches and 3 eighths, and the length of the Piece about six

foot and a half; they are not much used in the Field now, because the *Saker* which carries four pound and a quarter Ball is more esteemed.

**MINUTE**, is the 60th part of a *Degree*, see *Degree*.

**MOAT**, *Ditch* or *Foss*, is a Depth or Trench round the *Rampart* of a Place, to defend it, and prevent Surprizes; the brink of the *Moat* next the *Rampart*, is called the *Scarpe*, and that opposite on the other side, is called the *Counterscarp*, which forms a *Re-entring Angle* before the Centre of the *Curtin*. A dry *Moat* round a place that is large and has a strong Garrison, is preferable to one full of Water, because the *Passage* may be disputed inch by inch, and the *Besiegers* when lodged in the *Moat* are continually exposed to the *Bombs*, *Grenades*, and other *Fireworks* which are thrown incessantly over the *Rampart* on their Works. In the middle of dry *Moats*, is sometimes made another small *Moat*, called the *Cunette*, which is generally dug so deep till they find Water to fill it. The deepest and broadest *Fosses* are counted the best, but a deep *Foss* is preferable to a broad one; the ordinary breadth is about 20 fathom, and the depth about 16 foot. To drain a *Foss* or *Moat* full of Water, is to dig a Trench deeper than the Level of the Water to let it run out; when it is drained, there are Hurdles thrown up on the Mud and Slime, and cover'd

cover'd with Earth or bundles of Rushes, to make a sure and firm Passage.

**MOINEAU**, is a French Term for a little flat *Bastion* raised upon a *Re-entring Angle* before a *Curtin*, which is too long, between two other *Bastions*; it is commonly joined to the *Curtin*, but sometimes separated by a *Foss*, and is then called a *Detach'd Bastion*; they are not raised so high as the Works of the Place, because they must be exposed to the Fire of the Besieged, in case the Enemy should lodge themselves there. Their *Parapet*, as well as the *Parapet* of all *Out-Works*, ought to be *Cannon Proof*, that is to say, 18 foot thick.

**MONT-PAGNOTE**, or *Post of the Invulnerable*, is an Eminence chosen out of *Cannon-Shot* of the Place besieged, where curious Persons post themselves to see an Attack, and the manner of the Siege, without being exposed to any Danger. At the late Siege at *Landau*, there was a *Mont-Pagnote* raised on a Rising Ground, half way betwixt the two Attacks, by the Orders of Prince *Lewis of Baden*, for the King of the *Romans* to see the Attacks.

**MORTARPIECE**, is a sort of a short piece of *Artillery*, reinforced, and of a wide Caliber, differing from a *Cannon*, both in Form and Use; the *Cannon* serving to throw *Ball*, and the *Mortar* to throw *Bombs*, *Carcasses*, *Fire Pots*, and several other sorts of *Fireworks*, as likewise *Stones*.

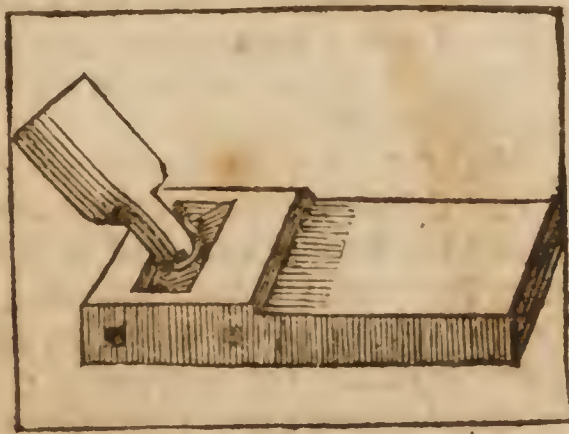
*Mortars* are used both at Sea and Land, but they differ very much in Form. A *Sea Mortar* is generally 13 inches diameter of the Bore, is longer and more reinforced than a *Land Mortar*, because they are fired with a greater quantity of Powder, sometimes with 30 or 33 pound; some of them have their Beds or Stools of Metal cast in a piece with the *Mortars*, others have them of a thick square piece of Oak, which by the help of *Hand screws* or *Facks*, is turned round upon a strong Axis of Iron to fire any way; they are always fixt at an Elevation of 45 Degrees; they carry *Bombs* of 200 pound, and generally weigh about 9 or 10000 weight.

*Land Mortars* are of different sorts; those used most in *England*, are 10, 13, 15, and 18 inches diameter; there are smaller *Mortars* of 6 and 8 inches; all but the 18 inch *Mortars* are mounted on a very thick plank of Oak, on which rise two *Cheeks* or *Brackets* on the sides of the *Mortar*, see the *Figure at Cheeks*. But the 18 inch is mounted on a *Low Dutch Carriage*, consisting of two strong planks of Wood bound with thick plates of Iron, and joined together with *Transoms* of Wood. All *Land Mortars* may be elevated to any degree of the *Quadrant*. They have no Wheels, therefore on a March they are laid upon a *Block Carriage* made on purpose. They are never carried along with the *Army*, because



of their great weight, except upon an Occasion of a Siege or Bombardment; but a sort of small *Mortars* called *Hobits*, mounted in *Gun-Carriages*, are always a part of the *Field Artillery*. See *Hobits*.

*Hand Mortars*, are likewise of several sorts, as *Tinkers Mortars*, which are fixed at the end of a staff of about four foot and a half long, the other end being shod with Iron to stick in the Ground, while a *Soldier* with his one Hand keeps it at an Elevation, and with the other Hand fires. *Fire-lock Mortars* are fixed in a Stock with a *Lock*, like a *Firelock*; they swing between two Arches of Iron, with Holes answering one another, by which the *Mortar* is elevated; these stand upon a sole or plank of Wood, and may be carried by one Man from one place to another. There are more sorts of *Hand Mortars*, but *Coe-horne's* new Invention exceeds them all, so far as to deserve a



particular Description. They are made of hammer'd Iron of four inches diameter of the Bore, ten inches and a half long; and nine

inches in the Chace, fixed upon a piece of Oak of 20 inches long, 10 and a half broad, and betwixt 3 and 4 thick; they stand fixed at 45 Degres of Elevation, and throw *Hand Grenades*, as all other *Hand Mortars* do; they are placed in the bottom of the *Trenches*, at 2 yards distance from one another, having each a *Soldier* to serve it, and an *Officer* to every 40 or 50, who lays them to what Elevation he thinks convenient, by raising or sinking the hind part of the *Bed*; three or four hundred of them are sometimes in Service at once, in different parts of the *Trenches*, 60, 70, or 80 in a place. Those in one place fire all at once, immediately after the *Batteries* have done, and are answered from another part of the *Trench*, which brings such a shower of *Hand Grenades* into the *Covert Way*, that those that defend it cannot prevent being in confusion.

**MOTION**, or *Movement of an Army*, is the several *Marches* and *Counter marches* it makes, or changing of its *Post* for an *Advantageous Encampment*, either with a Design to engage the *Enemy* to a *Battel*, or to shun fighting.

*Motion of a Bomb or Ball*, is the Progress it makes in the Air after it is delivered, and is of three sorts: The *Violent Motion*, is the first Expulsion when the *Powder* has worked its Effect upon the *Ball*, or so far as the *Bomb* or *Ball* may be supposed to go in a right Line. The *Mixt Motion*, is when

when the weight of the *Ball* begins to overcome the force which was given by the *Powder*, and the *Natural Motion*, is when the *Ball* or *Bomb* is falling.

**MOULDINGS** of a *Gun* or *Mortar*, are all the eminent parts, as *Squares* or *Rounds*, which serve generally for *Ornament*, such as the *Breech-Mouldings* and *Muzzle Mouldings*; the *Rings* of a *Gun*, are likewise *Mouldings*.

**MOUNT**, see *Cavalier*.

To *Mount the Guard*, is to go upon *Duty*: To *Mount a Breach*, is to run up it or to attack: To *Mount the Trenches*, is to go upon *Guard* in the *Trenches*.

**MUSQUET**, is the most commodious and useful *Fire-Arm* used in the *Army*, either in attacking or defending a *Post*; it is easily managed, and is carried with small trouble, which makes its use the more common; the *Pikes* being laid aside in our *Army* of late, and *Musquets* brought in their stead, shows that tho' *Pikes* are useful, yet *Musquets* are much more, and can do better Service. They carry a *Ball* of 16 in the pound: the length of the *Line of Defence* is limited in *Fortification*, by the ordinary distance of a *Musquet-Shot*, which is about 120 fathom, and almost all the *Military Architecture* is regulated by this Rule for the length of the *Defence*, as the effect of *Cannon* gives a Rule for the thickness of

the *Ramparts* and *Parapets*. See *Firelock*.

*Musquet-Baskets*, see *Baskets*.

**MUSQUETEER**, is a *Foot Soldier* arm'd with a *Musquet* or *Firelock*, *Sword*, *Bayonet*, &c. The *Grand Musqueteers* in *France*, are *Troopers* who fight sometimes on *Foot*, sometimes on *Horseback*; they are *Gentlemen* of good *Families*, and are divided into two *Troops*, the one called the *Grey Musqueteers*, because of the *Colour* of their *Horses*, the other the *Black Musqueteers*, for the same Reason.

**MUSQUETOON**, see *Blunderbuss*.

**MUSTER**, is a narrow *Review* of *Troops* under *Arms*, to see if they be compleat, and in good *Condition*; that their *Arms* and *Accoutrements* be in good *Order*; thereby to know the *Strength* of an *Army*: The *General* may order either *Muster* or *Review*, as often as he pleases.

*Muster-Master*, see *Commissary*.

*Muster-Rolls*, are the *Rolls* or *Lists* of the *Companies* or *Troops*, which are delivered to the *Commissary* by the *Captains*.

**MUZZLE** of a *Gun* or *Mortar*, is the extremity of the *Cylinder*, where the *Powder* and *Ball* is put in. The *Metal* which surrounds the *Extremity* of the *Cylinder*, is likewise called the *Muzzle*.

*Muzzle-Mouldings* is the *Ornament* round the *Muzzle*, see *Mouldings*.



## N.

To nail Cannon, or as some say to Cloy them, is to drive an Iron Spike by main force into the Vent or Touch-hole, which renders the Cannon inserviceable, till the Spike be either got out, or a new Vent drilled. In all Sortees or Sallies of a place besieged, nothing is so glorious as the nailing of the Besiegers Cannon, nor so advantagious to the Garrison, for it takes the Enemy some time to repair it. Mr. Dupas, Governour of Naerden in Holland, to repair his Fault in delivering the Town to the *Hollanders*, threw himself into the Grave, which was then besieged by them in the year 1674, to serve as Volunteer, and in a Sally the Garrison made behaved himself with great Bravery in clearing the *Trenches*, and was killed nailing the Enemies Cannon. The late Sally of the Garrison of *Verne*, and their nailing up the Enemies Cannon, was no less disadvantageous to the Enemy, than it was glorious and advantagious to the Besieged.

NAVE of a Wheel, is that short thick piece in the centre of the Wheel, which receives the end of the *Axletree*, and in which the ends of the *Spokes* are fixed; it is bound at each end with Hoops of Iron, called the *Nave bands*: It has likewise in each end of the Hole, through which the end of the *Axletree* goes, a Ring of Iron

called the *Wisher*, which saves the Hole of the *Nave* from wearing too big.

NECK of a Gun, is that part betwixt the *Muzzle Mouldings* and the *Cornish-Ring*. Neck of the *Cascabel*, is the part betwixt the *Breech-Mouldings* and the *Cascabel*.

## O.

OBLIQUE-FLANK, see *Flank*.

*Oblique-Defence*, is that which is under too great an *Angle*, as is generally the Defence of a second *Flank*, which can never be so good as a Defence in *Front*, nor is it approved by *Engineers*.

OBTUSE-ANGLE, see *Angle*.

OCTOGON, is a Figure of 8 *Sides* or *Polygons*, forming the same number of *Angles*, and capable of being fortified with 8 *Bastions*.

OFFICER in General, is a Person employed in some Office. *Officer in the Army*, is a Person having a Command in the *Army*. Those having Commissions from the *Queen* or *General*, are called *Commission'd Officers*, which includes all from the *General* to an *Ensign*. Such as have no Commission, but only *Warrants* from their *Colonels*, are called *Warrant-Officers*, as *Quarter-Masters of Horse*, and *Surgeons*. Those that have neither Commissions nor *Warrants*, are called *Staff-Officers*, as *Serjeants*, *Corporals*, *Lanjesales*, &c.

An *Officer* ought to be endued with many good Qualifications, as *presence of Mind*, *Judgment* to execute what he is commanded to the best Advantage; *Conception*, to apprehend easily what he is to do; *Complexion*, to enable him to endure the Fatigues of War; *Integrity*, that whatsoever is entrusted to him, he may behave himself honourably; *Diligence* to execute every thing with dispatch; *Secrecy* in all Affairs of Consequence, with which he is entrusted; *Conduct* to gain the Esteem of his Superiours; No *Presumption* nor *Obstinacy*, as being the stumbling Blocks of such as have too much Spirit.

*General Officers*, are such as command a Body of *Troops* of several *Regiments*, as the *Captain-General*, *Lieutenant-General*, *Major-General*, *Brigadeer-General*, *Quarter-Master General*, and *Adjutant-General*, see each at their proper Letters.

*Field Officers*, are those who have a command over a whole *Regiment*, as the *Colonel*, *Lieutenant-Colonel* and *Major*.

*Subaltern Officers*, are the *Lieutenants*, *Cornets*, and *Ensigns*.

TO OPEN *Trenches*, is the first breaking of Ground by the *Besiegers*, in order to carry on their *Approaches* towards a place: The difference betwixt opening and carrying on the *Trenches*, is that the first is only the beginning of the *Trench*, which is always turned towards the *Besiegers*: It is

begun by a small *Foss*, which the *Pioneers* make in the night time on their knees, generally a *Musquet-Shot* from the place, or half a *Cannon-Shot*, and sometimes without the reach of *Cannon-Ball*; especially if there be no *Hollows* or *Rising Grounds* to favour them, or if the *Garrison* be strong, and their *Artillery* well served. This small *Foss* is afterwards enlarged by the next *Pioneers* which come behind them, who dig it deeper by degrees, till it be about 4 yards broad, and 4 or 5 foot deep, especially if they be near the place; to the end, the Earth which is taken out of it may be thrown before them to form a *Parapet*, to cover them from the Fire of the *Besieged*: The place where the *Trenches* are opened, is called the end of the *Trench*. See *Break Ground*.

OPEN, is a Word of Command, as *Open your Ranks backward to such a distance*, is when the Ranks fall back without changing Aspect, observing their *Right Hand Men* and their *Leaders*. *Open your Files from the Centre*, is when they face outwards from the Centre: if there be an odd *File* it stands, the rest take the distance commanded. *Open your Files to the Right or Left*.

ORDER, is a Word of Command, as *Order your Firelock*, is the planting the But end of the Piece against the middle of the outside of the *Right Foot*, with the *Lock* outwards. *Open or marching*



*ing Order*, and *close Order*, are likewise Words of Command in the Exercise of a *Battalion of Foot*.

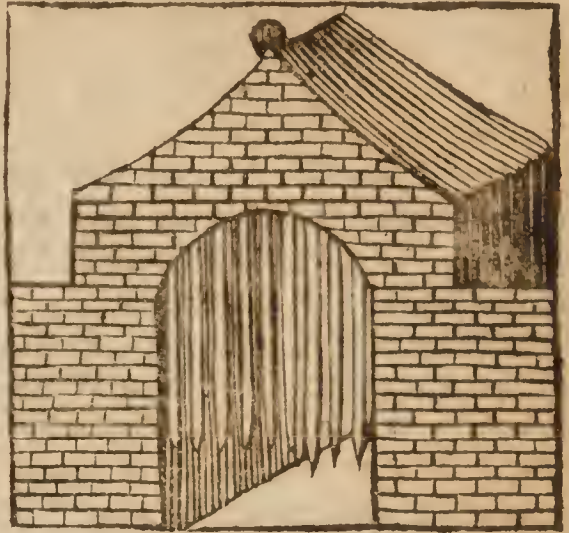
*Order of Battel*, is a Disposition of *Battalions* and *Squadrons* of an *Army*, in one or more Lines, according to the Nature of the Ground, either to engage an *Army*, or to be reviewed by the *General*

*Orders*, are the Notice given every night by the *General* to the *Lieutenant-General* of the Day, who conveys them to the *Major-General*, and he to the *Brigade-Major*, who gives them to the *Adjutants*, and they to the *Serjeants*, that the *Army* may know when to march; what *Detachments*, *Convoys*, *Parties*, &c. are to go abroad next morning; when they are to Forrage or Graze; when they are to Muster or Review, and many other things; the Orders are generally given out in the evening at the *Head Quarters*, where all the *Generals* meet at that time. *Orders in general*, signifie all that is commanded by a *Superiour Officer*.

ORDNANCE, all sorts of *Guns*, *Mortars*, *Firelocks*, *Carabines*, *Pistols*, *Pikes*, *Swords*, &c. all sorts of *Arms* or *Stores*, belonging either to Offence or Defence. See *Cannon*.

ORGNES, are thick long pieces of Wood pointed and shod with Iron clear one of another, hanging each by a particular Rope or Cord over the Gate-way of a strong Place, perpendicular, to be let fall in case of an Enemy.

Their Disposition is such, that



they stop the Passage of the Gate, and are preferable to *Herses* or *Portcullises*, because these may be either broke by a *Petard*, or they may be stop'd in their falling down, but a *Petard* is useles against an *Orgne*, for if it break one or two of the Pieces, they immediately fall down again, and fill up the vacancy; or if they stop one or two of the Pieces from falling, it is no hindrance to the rest, for being all separate, they have no dependance on one another. The Figure will explain them better.

ORILLON, is a Mass of Earth faced with Stone, built on the Shoulder of a *Cazemated Bastion*, to cover the *Cannon* of the retir'd *Flank*, and hinder its being dismounted by the Enemies *Cannon*. They are made sometimes round, and sometimes square; some maintain the round to be best, because they are not so easily beat down by the *Cannon* of the Besieged, for their round-

ness hinders the *Ball* very much from its Effect. Others like the square *Orillons* better, because they are less Charge, and can contain more Men to fire directly on the *Face* of the opposite *Bastion*, than the round can do. *Orillon*, is likewise called the *Shoulder* and the *Epaulment*.

**ORTHOGRAPHY** or *Profile*, is the Representation of a Work, showing its breadth, thickness, height and depth, so as it would appear, if cut perpendicularly on the *Horizontal Line*, from the uppermost to the lowest of its parts; as *Ichnography* supposes an Edifice or Work cut Horizontally, so *Orthography* supposes it cut Vertically, and never shows the length of any of its parts, as a *Plan* does, but then a *Plan* shows nothing of the height or depth of a Work. See the Figure at *Profile*.

**OVAL**, is a plain Figure bounded by its own Circumference, within which no Point can be taken, from which all Right Lines drawn to the Circumference can be equal.

**OUT-WORKS**, which are likewise *Advanced Works*, *Detached* and *Exterior-Works*, are Works of several sorts, which cover the Body of the Place; as *Ravelins*, *Half-Moons*, *Tenailles*, *Horn-works*, *Crown-works*, *Counter-guards*, *Envelopes*, *Swallows-Tails*, *Lunettes*, &c. These serve not only to co-

ver the place, but likewise to keep an Enemy at distance, and to hinder his getting any Advantage of Hollows or Rising Grounds that may happen near the *Counter-scarp* of the Place; for these Cavities and Eminences may serve for *Lodgments* to the Besiegers, and facilitate the carrying on their *Approaches*, and raising their *Batteries* against the Town. When *Out-Works* are for some Reasons placed one before another, as in the *general Plan*, you'll find a *Ravelin* before a *Curtin*, a *Horn-work* before the *Ravelin*, and a small *Ravelin* before the *Curtin* of the *Horn-work*; then the nearest to the Body of the Place must be the highest, tho' lower than the Works of the Place, that they may command gradually those which are without them, that the Enemy may be obliged to dislodge, in case they had Possession of them, as likewise lest the Enemy, being Masters of them, should the easier cover themselves; so that the first *Ravelin* ought to be lower than the *Tenaille* of the Place, and higher than the *Horn-work*, and the *Horn-work* ought to be higher than the small *Ravelin* which covers it. The *Gorges* of all *Out Works* must be plain, lest the Besiegers being Masters of the Works, it should serve to cover them from the Fire of the Place.

**OXIGON**, see *Triangle*.



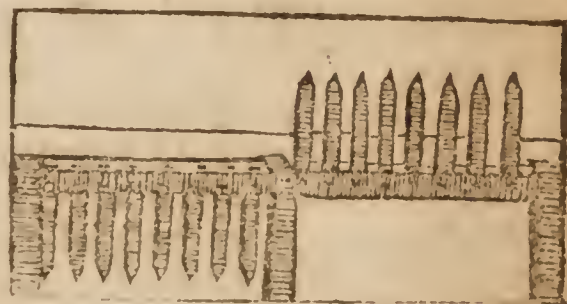
P.

PACE, a Measure used in *Geometry* and *Fortification*, and much spoke of in *Military Discipline*. A *Geometrical Pace* is 5 Foot, an *Italian Mile* is 1000 *Geometrical Paces*; an *English Mile* is 1250; a common *Pace* is two Foot and a half.

PALISADES, are long pieces of Wood or Stakes, planted generally before *Posts*, which might be taken by *Surprize*, or where the *Access* is very easie, to secure them both from a sudden and a regular *Attack*. They are generally 8 foot long, and 6 or 7 inches square; the one end is pointed, and the other is let 3 foot perpendicularly into the *Ground*: sometimes they are planted obliquely, pointing towards the *Enemy*, that in case the *Besiegers* should endeavour to pull them out with *Cords*, the *Cords* may slip off, having no hold. *Palisades* are planted on the *Berm* at the Foot of *Bastions* of *Places* surrounded with a wet *Foss*, to prevent an *Escalade* or *Surprize*. They are likewise planted in the bottom of dry *Moats*, especially if there be *Traverses* made. Sometimes they are set in the *Gorges* of *Half-Moons* and other *Out-Works*. But above all, the *Parapet* of the *Covert Way* must be well palisaded, either on the *Parapet*, or in the *Covert Way*. They are to stand so close, that the *Muzzle* of a *Musquet* can but

just get betwixt them. The method of planting them, is by digging a *Trench* of about a foot, or a foot and a half wide, and three foot deep, which after the *Palisades* are set in, as close to one another as before said, is filled with *Earth*, which is beat and set very hard about the *Palisades* with *Rammers* or *Stampers*. *Palisades* are very useful, and a good *Defence* in all sorts of *Fortifications*, provided they be well planted and close. They are likewise useful in *Sieges*, to plant on the out-side of the *Fosses* of the *Batteries*, to prevent the *Besiegeds* surprizing the *Batteries* in their *Sallies*, and their nailing the *Cannon*. *Palisades* are either pull'd up by shaking them with *Ropes*, cut down by the *Grenadiers*, beaten down with *Cannon*, or burn'd down with small *Fascines* pitch'd over.

*Turning-Palisades*, is an Invention of *Cochorne's*. To preserve the *Palisades* of the *Parapet* of the



*Redans* from the *Besiegers* *Shot*; he orders them so, that as many of them as stand in a rods length, turn up and down like a *Trap*, with all the facility imaginable. They are a good *Defence*, because they are not in sight of the

Besiegers, but just when they bring on their Attack, and yet are always ready to do the proper Service of *Palisades*. They are likewise frugal, because they may be preserved in the *Magazines*, and need not be left on the *Parapet*; besides there may be square *Palisades* kept ready to supply the place of such as may be broke by the *Besiegers Cannon*. The Figure shows one set up, and another down.

PAN of a *Bastion*, is the same with the *Face* of a *Bastion*. See *Face*.

PARADE, is the place where *Troops* meet together to go upon *Guard*, or any other Service. In a *Garrison* where there are 2 or 3 or more *Regiments*, each has their parading Place appointed, where they are to meet upon all Occasions, especially upon any *Alarm*. In a *Camp*, all *Parties*, *Convoys*, or *Detachments* that are to go abroad, have a parading Place appointed them at the Head of some *Regiment*.

PARALLEL, is a Term in *Geometry*, signifying two Lines equally distant from one another; which if prolong'd *ad Infinitum* would never meet: the opposite sides of a *Square* are parallel one to another. The *Ranks* of a *Battalion* are likewise parallel, so are the *Files* amongst themselves. The *Counterscarp* is generally drawn parallel to the *Faces* of the *Bastion*.

*Parallels* at a *Siege*, signifie the

*Trenches* or *Lines* made parallel to the Defence of the Place besieged; they are likewise called *Lines of Communication* and *Boyaus*.

PARAPET, is an Elevation of Earth, designed for covering the *Soldiers* from the *Enemies Cannon* or *Small-Shot*, wherefore its thickness is from 18 to 20 foot; it is 6 foot high on the inside, and 4 or 5 on the side next the *Country*; it is raised on the *Rampart*, and has a Slope above called the *Superiour Talus*, and sometimes the *Glacis* of the *Parapet*, on which the *Soldiers* lay their *Musquets* for to fire over: This Pente or Slope makes it easie for the *Musqueteers* to fire into the *Ditch*, or at least on the *Counterscarp*. To fire razing the *Glacis* of the *Parapet*, is called *firing in Barbe*. The *Exterior Talus* of the *Parapet*, is the Slope facing the *Country*. The height of the *Parapet* being 6 foot on the inside, it has a *Banquet* or two for the *Soldiers* who defend it, to mount upon, that they may discover the *Country* the better, as likewise the *Foss* and *Counterscarp*, to Fire as they find Occasion.

*Parapet of the Covert Way* or *Corridor*, is what covers that Way from the sight of the *Enemy*, which renders it the most dangerous Place for the *Besiegers*, because of the Neighbourhood of the *Faces*, *Flanks*, and *Curtins* of the Place; it is the same with the *Glacis*, which signifies that whole



Mafs of Earth that ferves to cover the *Goridor*, and goes floping towards the Country.

*P A R K of Artillery*, is the Place appointed for the Encampment of an *Artillery*, which is generally the *Rear* of both *Lines* of the *Army*. See *Artillery-Park*.

*Park of Artillery* at a *Siege*, is a *Post* fortified out of *Cannon-shot* of the Place befieged, where are kept all the *Arms* and *Utensils* neceffary for a *Siege*; as *Bombs*, *Petards*, *Carcasses*, *Hand Grenades*, *Powder*, *Ball*, &c. with all forts of *Instruments* for removing the Earth, as *Spades*, *Shovels*, *Pick-axes*, *Bills*, *Hows*, and *Wheelbarrows*, with a great many things more too tedious to be related here. Great *Precaution* is to be had about the *Park of Artillery*, for fear of *Fire*; therefore the *Centries* have either *Pikes* or *Staves* made on purpose, for they are not allowed to ftand with *Firelocks*.

*Park of Provisions*, is the Place where the *Sutlers* pitch their *Tents*, and fell *Provisions* to the *Soldiers*; which is in the *Rear* of each *Regiment*, but the chief of all is the *Ground* allotted at the *Head Quarters* for the *Sutlers*, where there is ftill every thing requifite to be had, and it is from thence for the moft part that the *Sutlers* are furnifhed. But I think the place where the *Bread-Waggons* are drawn up, and where the *Soldiers* receive their *Ammunition-Bread*, being the *Store* of the *Army*, is properly the *Park of Provisions*.

*PARLEY*, fee *Chamade*.

*PARTISAN*, is a *Person* who is very dexterous in commanding a *Party*, and knows the *Country* very well; employed in furprizing the *Enemies Convoys*, or in getting *Intelligence*.

*Partifan-Party*, is a *small Body* of *Infantry* given to a *Partifan*, to make an *Incurfion* upon the *Enemy*, to lurk about their *Camp*, to disturb their *Forragers*, and to intercept their *Convoys*.

*Partufan*, is a *Weapon* fometimes carried by *Lieutenants*, not unlike a *Halbert*.

*PARTY*, is a *small Body* of *Horse* or *Foot*, fent into the *Enemies Country*, to pillage or take *Prifoners*, or to oblige the *Country* to come under *Contribution*, which is to pay a certain *fum* of *Money* to redeem themfelves from *Plunder*. *Parties* are often fent out by a *General* to view the *Way* and *Roads*, and to fetch *Intelligence*, to look for *Forrage*, or to amufe the *Enemy*. Upon a *March* they are frequently fent upon the *Flanks* of the *Army*, to discover the *Enemy* if near, and to prevent the *Army's* being furprized.

*Party-Bleu*, are a *Company* of *Villains* who infest the *Roads* in the *Netherlands*; they belong to neither *Army*, but rob both fides, without any regard to *Pafl'es*.

*PAS DE SOLIRIS*, is the fame with *Liziere*, fee *Liziere*.

*P A T E E*, a *small Work* not unlike a *Horse shoe*, that is to fay an *Elevation* of *Earth* of an *irregular Form*, but for the moft part

oval, having a *Parapet*; it is generally raised in marshy Grounds, to cover the Gate of a Place; it has only a fore-right Defence, and has nothing to flank it.

**PATROUILLE**, is a Night Watch, consisting of 5 or 6 Men commanded by a *Serjeant*, who are sent from the Guard to walk in the Streets and prevent Disorder.

To *Patrouille*, is to go over the Quarters of a Town to observe what is doing in the Streets, and to be careful of the Tranquillity and Surety of the Place.

**PAVILION**, an old Term for a *Tent*, see *Tent*.

**PAY**, is the Allowance or Wages which a *Soldier* has for his Maintenance in the Service, and is greater or lesser, according to the Custom of different Countries.

*Pay-Master*, is he who is entrusted with the paying of a *Regiment*.

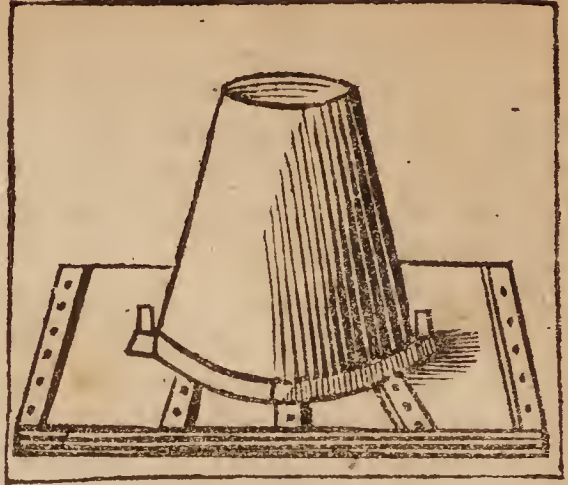
**PEDRERO**, a small sort of *Guns* used on the *Quarter-Decks* of *ships*; some of them have *Breeches* to screw out, so that they receive the Charge that way.

**PELATOON**, see *Platoon*.

**PENTAGON**, is a Figure bounded by five *Sides* or *Polygons*, which form so many *Angles*, capable of being fortified with the like number of *Bastions*.

**PERPENDICULAR**, is a straight Line raised upright upon another straight Line, without leaning to one side or another, but making the *Angles* on both sides equal.

**PETARD**, is an Engine of



Metal shaped like a *Sugar-Loaf* or *High Crown'd-Hat*, made for breaking open *Gates*, *Draw-Bridges*, *Barricades*, *Barriers*, &c its length is 7 or 8 inches, the diameter of the Mouth is 5 inches, and that at bottom one and a half; the thickness of Metal at the Neck is half an inch, and that of the Breech 12 or 15; its Charge of *Powder* is 5 pound or thereabouts, and it weighs about 55 or 60. There are much larger and stronger *Petards*, and there are likewise smaller: The first are employed in breaking open strong Reinforced *Gates*, and the last such as can make but small Resistance. When the *Petard* is loaded with *Powder*, it is put upon a strong piece of *Plank*, cover'd with a plate of *Iron* on the outside, which covers the *Ouverture*, being hollowed a little for the purpose; the place where they join, is done over with *Wax*, *Pitch*, *Rosins*, &c. to inforce the Effect. This being done, it is carried to the Place designed to be blown up, where join-



joining the Plank exactly to the Gate, the Petard is stayed behind and fired by a *Fusee*, that the *Petardeer* may have time to get off. They are sometimes used in *Counter-mines* to break through into the Enemies *Galleries* to dis-appoint their *Mines*.

PETARDEER, is he who loads, fixes and fires the Petard, and ought to be a Man of Courage, for he is often exposed.

PICK-AXES, are a sort of Hand-tools very useful in an Army, see *Ax*.

PICKET, is a small pointed Staff shod with Iron, which serves to mark out the *Angles* of a *Fortification*, and the principal Parts, when the *Engineer* is tracing a *Plan* upon the Ground with a *Line*. There are likewise small pointed Stakes, which serve to drive through *Fascines* or *Gazons* to keep them fast when the Earth is bad, or the Work raised in haste.

*Pickets*, is likewise the Stakes which the *Troopers* drive before their *Tents*, about 2 yards distance; from one to another of these *Pickets*, is stretched a Rope called the *Picket-Rope*, to which they tie their *Horses*.

*Picket*, is likewise a Stake of nine or ten foot high, fixed in the Ground, and standing upright; round the foot of it are small Sticks with sharp points: this is at the *Head* of each *Regiment* of *Horse*, to punish Crimes that do not deserve Death, by putting the

Criminal with his Foot on one of these small pointed Sticks, and tying up his Hand to a Ring above his Head, so that he neither stands nor hangs, nor can he shift his Foot, nor change Feet to ease himself.

*Picket-Guard*, see *Guard*.

PIECE of Ordnance, includes all sorts of great Guns and *Mortars*. *Battering-Pieces*, are the large Guns used at Sieges for making the *Breaches*, such as the 24 Pounder and the *Culverine*; the one carrying 24, and the other 18 pound Ball. *Field Pieces*, are 12 Pounders, *Demi-culverins*, 6 Pounders, *Sakers*, *Minions*, and 3 Pounders, which march with the Army, and encamp always behind the second *Line*, but in Day of Battel are in the *Front*. A Soldiers *Firelock* is likewise called his *Piece*.

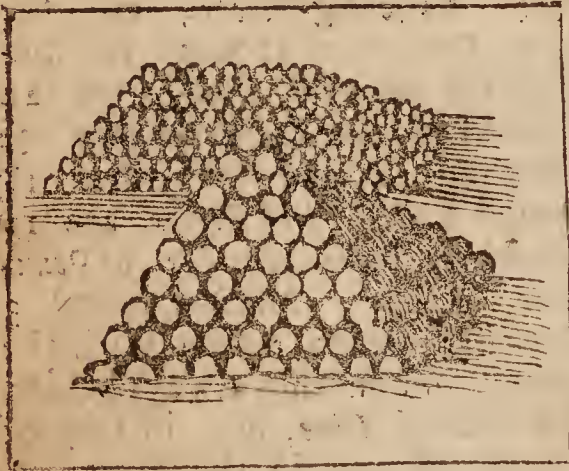
PIKES, are the Arms carried by *Pike-men*, who used formerly to be a third part of the *Company*, but they are now turned to *Musquetears*. The *Pike* is made of a point of Iron in form of the Leaf of an *Apricock-Tree*, called the *Spear*, about 4 inches long, and 2 broad in the middle, from whence it runs to a point: The *Spear* has two Branches or Plates of Iron to fix it to the Staff, of about 2 foot long, and strong enough to resist the stroak of a broad Sword. The Staff or Shaft of the *Pike*, is about 13 or 14 foot long, made of a slip of Ash very streight, about an inch and a



quarter thick at the greatest end, which is shod with Brass or Iron sharpened to a point to stick in the Ground.

*Half-Pike*, is the Weapon carried by an Officer of Foot, and differs from a *Pike*, because it is but 8 or 9 foot long, and the *Spear* is smaller and narrower.

PILE or Pyramid of Bombs or



*Ball*, which is the way of disposing them in *Magazines*, is the piling them up regularly in the Courts of the *Arsenal*; as may be seen at *Woolwich*; as suppose 385 Bombs to be made in a *Pile*, the first must be laid in a square of 10 on each side, which makes 100 in the first *Bed*, and let half a foot in the Ground; to the end, the great weight which comes above them may not force them to slide out, for then the whole *Pile* falls; the second *Bed* will be 81, which is 9 of a side, and must be laid on the vacant space which happens between every 4 Bombs of the first *Bed*; and the third *Bed* being eight of a side, is 64 laid the same way, and so to the top of the *Pile*, which

will terminate in one *Bomb* making a *Piramide*, whose *Basis* is a Square.

PIONEERS, are such as are commanded in from the Country, to march along with an *Army* for mending the Ways, for working on *Entrenchments* and *Fortifications*, and for making *Approaches*; but the *Soldiers* are most generally employed in all these things.

PISTOL, is a *Fire-Arm* used by the *Cavalry*; the length of it with the Stock, is about a foot and a half, carrying a *Ball* of half an ounce weight. Every *Trooper* has a pair of *Pistols* before him.

PIVOT, is a piece of Iron or Brass rounded at the point, that it may turn easily round in a piece or sole of Iron or Brass, hollowed to receive it.

PLACE, signifies a Fortress or Town fortified regularly or irregularly, and is often used; as when we say it is a strong Place, &c.

Place of Arms in a Town, is a space left near the Centre of the Place, where generally the *Grand Guard* is placed, and where the *Soldiers* of the *Garrison* come to draw up in *Battalia* to mount the *Guard*, from whence they are marched to their particular Posts. On an *Alarm*, the *Soldiers* who are not on the *Guard*, are to repair thither with their *Arms*. In Places regularly fortified, the *Place of Arms* ought to be in the Centre, and of a Figure like that of the



*Polygon*; its greatness ought likewise to be proportioned to the *Polygon*.

*Place of Arms* of an *Attack*, or of a *Trench*, is a *Foss* with a *Parapet*, or an *Epaulment* to cover a *Body* of *Horse* or *Foot*, where they may be at their *Arms* to withstand the *Sallies* of the *Besieged*. The *Places* most convenient for making *Places of Arms*, are such as can easily succour one another, and are out of sight of the *Defences* of the *Place* *besieged*, as *Hollows*, or *Hollow Ways*, especially if they cross one another, for their depth serves as a *Parapet* to cover the *Infantry*: If they have not that natural *Depth*, they may supply that *Defect* with *Gabions*, *Sand-bags*, or whatever can hinder the *Besiegers* from seeing into it. If there be a *Foss* made round it, it is called a *Redoubt*. In carrying on the *Trenches*, there must be such *Redoubts* raised at convenient distances to lodge the *Infantry*, which have the *Guard* of the *Trenches*.

*Place of Arms of a Camp*, is the *Place* chosen at the *Head* of the *Camp* for the *Army* to form themselves in *Line of Battel*, for a *Review* or the like.

*Place of Arms of a Troop of Horse*, or *Company of Foot*, is the *Place* where the *Troop* or *Company* are assembled.

**PLAN**, as a *Term* in *Geometry*, is a *Superficies*, whose parts are all equally disposed betwixt its *Extremities*, so that one part is neither higher nor lower than an-

other. *Horizontal-Plan*, is when it is parallel to the *Horizon*; and it is a *Vertical-Plan*, when it is perpendicular to the *Horizon*.

*Plan*, *Ground-Plot*, or *Ichnography* in *Fortification*, is the *Representation* of the first or fundamental *Tract* of a *Work*, shewing the length of its *Lines*, the quantity of its *Angles*, the breadth of the *Ditches*, thickness of the *Ramparts* and *Parapets*, and the distance of one part from another, as the general *Plan* at the beginning shows. So that a *Plan* represents a *Work*, such as it would appear if it were cut equal with the *Level* of the *Horizon*, or cut off at the *Foundation*. But it marks neither the *Heights* nor *Depths* of the several parts of the *Works*, which is properly *Profile*, and which expresses only the *Heights*, *Breadths* and *Depths*, without taking notice of the *Lengths*. As *Architects*, before they lay the *Foundation* of their *Edifice*, make their *Design* upon *Paper*, by which means they find out their *Faults*; so an *Engineer* before tracing his *Works* on the *Ground*, should make *Plans* of his *Designs* upon *Paper*, to the end he may do nothing without serious *Deliberation*. *Plans* are very useful for *Generals* or *Governours*, in either attacking or defending a *Place*, in chusing a *Camp*, determining *Attacks*, conducting the *Approaches*, or in examining the *Strength* and *Weakness* of a *Place*; especially such *Plans* as represent a *Place* with the *Country* about



it, showing the *Rivers, Fountains, Marshes, Ditches, Valleys, Mountains, Woods, Houses, Churches,* and other particulars which happen about a Place.

**PLANKS** or *Madriers*, are pieces of Oak very thick and broad, see *Madrier*.

**PLATES.** The *Prise-Plates*, are two Plates of Iron on the *Cheeks* of a *Gun-Carriage* from the *Capesquare* to the *Centre*, through which the *Prise Bolts* go, and on which the *Hand-spike* rests, when it poises up the *Breech* of the Piece. *Breast-Plates* are the two Plates on the *Face* of the *Carriage*, one on each *Cheek*. *Train-Plates*, are the two Plates on the *Cheeks* at the *Train* of the *Carriage*. *Dulidge-Plates*, are the six Plates on the *Wheel* of a *Gun-Carriage*, where the *Fellows* are joined together, and serve to strengthen the *Dulidges*.

**PLATFORM** in general, is an Elevation of Earth on which *Canon* is placed, such as the *Mounts* on the middle of *Curtins*: But it is likewise a sort of *Bastion* constructed on a *Re entering Angle*, when its two *Faces* make a *Right Line*. *Platform of a Battery*, is a Floor of Boards nailed down upon *Sleepers*, sloping a little towards the *Embrasure*, for the *Guns* to run upon, and to keep the *Wheels* from sinking into the *Ground*. The *Slope* serves to diminish the *Reverse* of the Piece, and for the more easie running her up to her *Embrasure*. Each *Gun*

has generally a *Platform* for herself. See *Battery*.

**PLATOON**, or rather *Peloton*, a small square *Body* of *Musqueteers*, such as is used to be drawn out of a *Battalion* of *Foot*, when they form the *Hollow Square* to strengthen the *Angles*. The *Grenadiers* are generally thus posted. *Peloton* is the *French Word*, only the *Vulgar Corruption* has brought it to be pronounced *Platoon*.

**PONIA RD**, a sort of short *Sword* used in *Spain* and *Italy*.

**POINT** *Mathematick*, is what hath no parts; which is to say, neither *Length*, *Breadth* nor *Thickness*, and which consequently cannot be expressed or conceived.

*Point Blank of a Gun*, is the distance she throws a *Ball* in a supposed *direct Line*; the *Gun* being laid at no *Elevation*, but *levell'd* parallel to the *Horizon*. I say supposed *direct Line*, because it is certain and easily proved, that a *Ball* cannot fly any part of its *Range* in a *right Line*, but the swifter it flies, the nearer it approaches to a *right Line*; or the swifter it flies, the less crooked is his *Range*. This was the *Opinion* of *Nicolas Tartaglia*, and is since generally approved.

**POLYGON**, is a *Figure* of more than four *Sides*, and is either *Regular* or *Irregular*, *Exterior* or *Interior*.

*Polygon Regular*, is whose *Angles* and *Sides* are equal. It has an *Angle* of the *Centre*, and an *Angle* of the *Polygon*. The *Centre* of a



*Regular Polygon*, is the Centre of a Circle which circumscribes the *Polygon*, that is, whose Circumference passes through all the *Angles* of the *Figure*.

*Irregular Polygon*, is whose *Sides* and *Angles* are unequal.

*Exterior Polygon*, is the Lines drawn touching the Points of the *Flanked Angles*, when a Place is fortified inwards. *Errard* was the first that fortified after this Manner. Count *Pagan* improved it, and *Monseur de Vauban* brought it to perfection.

*Interior Polygon*, is to fortifie outwards, which makes the *Angles* of the *Polygon* to be the *Angles* of the *Gorge*, so that the whole *Bastion* is without the *Polygon*. *Manesson Mallet*, *De Ville*, and most *Engineers* follow this Method.

**PONTON**, is a late Invention, being a Boat of Latten of about 8 yards long and 2 broad; the form of it is a long Square, having a large Ring at each corner; it is laid upon a *Carriage* when the *Army* marches, and drawn by 5 Horses. Each *Boat* has an *Anchor* and *Cable*, and *Baulks* and *Chests* belonging to it. The *Baulks* are about 5 or 6 inches square, and about 7 yards long. The *Chests* are boards joined together by wooden bars, about a yard broad, and 4 yards long. When there is occasion for using these *Boats*, they are slipp'd into the Water, and placed about 2 yards asunder, each fasten'd with an *Anchor*, having besides, a

strong Rope which runs through the Rings, and is fasten'd on each side the River to a Tree or a Stake made very fast in the Ground. The *Baulks* are laid cross the *Boats*, at some distance from one another, and the *Chests* upon them joined close, which makes a Bridge in a very short time, for *Horse*, *Foot* or *Artillery* to march over.

PORT, see *Gate*.

PORTCULLISES, see *Herse*.

PORT-FIRE, is a Composition of *Meal-powder*, *Sulphur* and *Saltpetre*, drove into a case of Paper, but not very hard; it is about 9 or 10 inches long, and is used to fire *Guns* or *Mortars* instead of *Match*, but then it is cut into pieces of about an inch long, and put in a *Linstock*, or cleft Stick.

POST, is any sort of Ground, fortified or not, where a Body of Men can fortifie themselves, or be in a condition of fighting an Enemy. To relieve a *Post*, is to go upon Guard in a *Post*; to abandon or quit a *Post*; to gain a *Post* Sword in Hand, &c.

*Post of Honour*; the *Advance-Guard* is a *Post of Honour*; the Right of the two *Lines* is the *Post of Honour*, and is always given to the eldest *Regiments*; the Left is the next *Post*, and is given to the next eldest, and so on; the Centre of the *Lines* is the *Post* the least honourable, and is given to the youngest *Regiments*.

*Advanc'd-Post*, is a spot of Ground seized by a Party to secure

cure their *Front*, and to cover the *Posts* that are behind them.

POSTERN, is a small Door in the *Flank* of a *Bastion*, or other part of a *Garrison*, to march in and out unperceived by the Enemy, either to relieve the Works, or to make *Sallies*.

POT, see *Fire pot*.

POUCH; a *Grenadiers Pouch*, is a square Case or Bag of Leather, with a flap over it, hanging in a strap of about two inches broad over the Left Shoulder, in which he carries his *Grenades*.

POWDER, is a Composition of *Sulphur*, *Saltpetre*, and *Charcoal*. The *Sulphur* and *Charcoal* take fire, and the *Saltpetre* makes the Crack. Since the Invention of *Powder*, a great many War-like *Machines* have been invented, which occasions such a consumption of *Powder*, especially at *Sieges*, that it cannot be determined; for the *Cannon*, *Bombs*, *Hand-Grenades*, *Musquets*, *Mines*, and other extraordinary *Distributions*, besides the Waste, consume a great deal.

POUNDER, as a 24 Pounder, is a *Gun* carrying a *Ball* of 24 pound, its diameter is six inches, the length is from ten to twelve foot long, it is a good battering *Gun*. *Twelve Pounder*, is a *Gun* carrying a *Ball* of twelve pound, the diameter is four inches and 5 eighths, its length from eight to ten foot. *Six Pounder* carries a *Ball* of six pound, its diameter is three inches and six eighths, its length from seven to eight foot; and *Three Pounder*,

carries a *Ball* of three pound, the diameter of the Bore is three inches, and the length of the Piece about 6 foot or 6 and a half.

PRIESTS BONNET, see *Bonnet a Prêtre*.

PROVISIONS, is what a *General* ought to be very careful of, never suffering his *Army* to be in want of Subsistence, else they must needs perish. A *Governour* of a *Garrison* ought to be well provided of Provisions of all sorts, such as *Wheat*, *Rye*, *Pease*, *Beans*, *Barley*, *Beef*, *Mutton*, *Veal*, *Bacon*, *Cheese*, *Butter*, *Salt*, *Pepper*, *Onions*, *Nutmegs*, *Beer*, *Wine*, *Brandy*, and many other things which are absolutely necessary in a *Garrison*.

PROVOST-MARSHAL of an *Army*, is one appointed to secure *Deserters* and all other *Criminals*; he is to go often abroad round the *Army*, to hinder the *Soldiers* from pillaging; he indites *Offenders*, and executes the Sentence which is pronounced; he likewise regulates the *Weights* and *Measures* of the *Army*, and the *Price* of all sorts of *Provisions*.

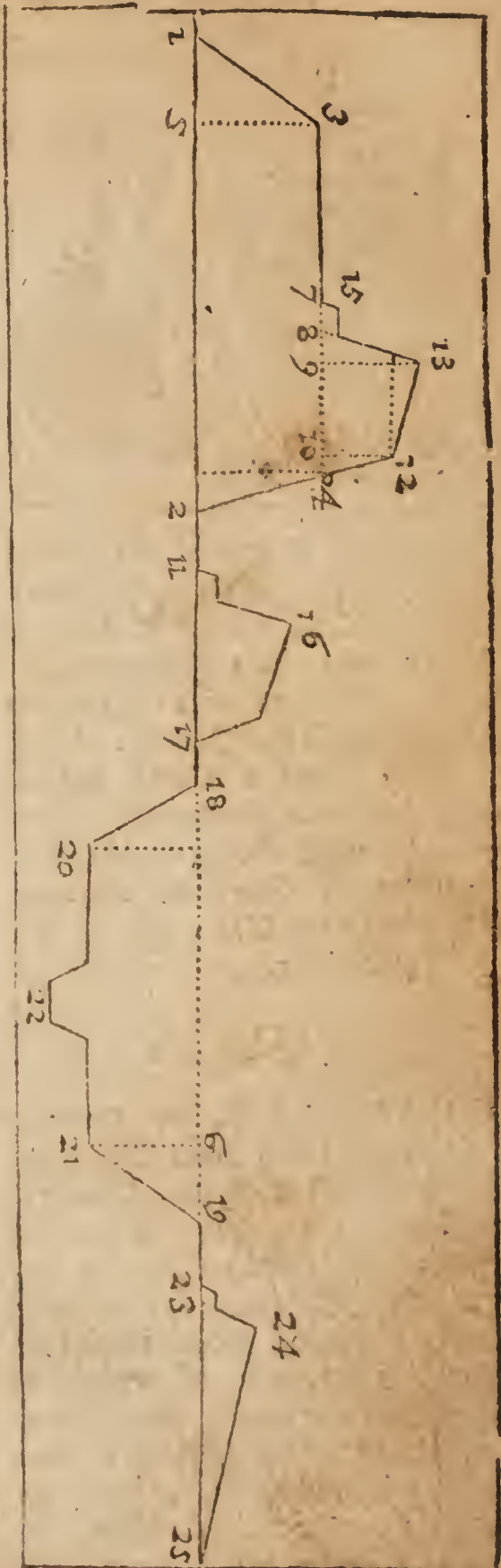
PROFILE; *Engineers* to represent the *Heights*, *Depths* and *Thickness* of a *Work*, with the *Depth* and *Breadth* of the *Fosses*, &c. do it by *Profile* or *Orthography*, which supposes the *Work* to be cut perpendicularly from top to bottom. The following *Figure* shows the *Profile* of a *Rampart*, *Fausebray*, *Foss*, *Covert Way*, and *Esplanade*; every thing is ex-



explained by Letters, and the pro-

An Explanation of the Figure.

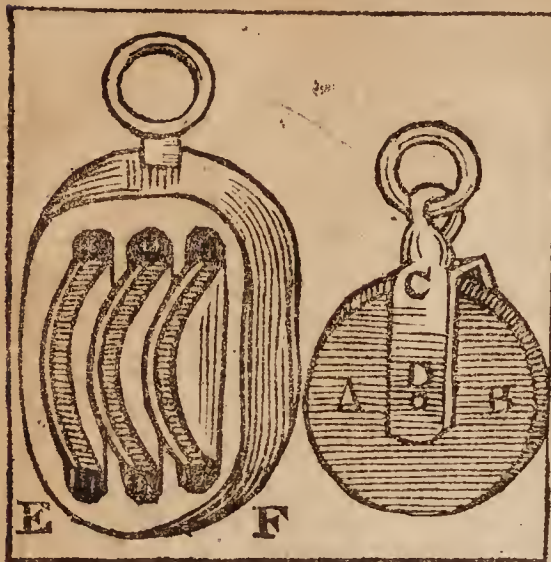
- 1, 2, 3, 4. The Solidity of the Rampart.
- 1, 2. The Basis of the Rampart.
- 3, 4. The Top of the Rampart.
- 3, 5. The Height of the Rampart.
- 1, 3. The Interior Talus or Slope of the Rampart.
- 3, 4. The Exterior Talus of the Rampart.
- 3, 7. The Terre plein.
- 7, 4. The Basis of the Parapet.
- 7, 15. The Banquett.
- 8, 13. The Interior Talus of the Parapet.
- 4, 12. The Exterior Talus of the Parapet.
- 12, 13. The Superior Talus of the Parapet.
- 9, 13. The Interior Height of the Parapet.
- 10, 12. The Exterior Height of the Parapet.
- 4. The Cordon.
- 11, 16, 17. The Fausebray with its Banquett.
- 17, 18. The Lixiere or Berm.
- 18, 19, 20; 21. The Foss.
- 18, 20. The Scarpe.
- 19, 21. The Counterscarp.
- 22. The Cunette.
- 6, 21. The depth of the Foss.
- 19, 23. The Covert Way.
- 23, 24, 25. The Glacis or Parapet of the Covert Way.
- 23, 24. The height of the Parapet of the Covert Way, with its Banquett.
- 23, 25. The Basis of the Glacis.
- 24, 25. The Pent or Slope of the Glacis.



per Names set down.

PUL-

**PULLY**, is a Wheel of Wood join, from whence there hangs a Thread with a Plummet, which marks the different Elevations of Pieces, and the greatness of the Angles. The way of using it, is by putting the longest side into the Muzzle of the Piece; the Plummet falls perpendicularly, and marks the Angle on the *Quadrant*; when the *Gun* or *Mortar* is elevated to the Degree desired, it is kept there by Coins of Wood put under the *Breech* of a *Gun*, or betwixt the *Bracket-Bolts* of a *Mortar*.



or Metal, *A*, *B*, put in a piece of Wood or Iron, as *C*, *D*, or into a Block, as *E*, *F*, where it has liberty to move in a Hole cut for the purpose, on an *Axis* or *Gudgeon* going through the Centre: Over the *Pully* goes a Cord which serves to raise Burthens. They are much used about an *Artillery*, in raising of *Guns* or *Mortars*, especially in the *Gin*.

**PYE**, see *Gin*.

**Q.**

**QUADRANT**, or quarter of a Circle, is an Instrument of Brass or Wood used by *Gunners*, in pointing their *Guns* to an Object, and by *Bombardeers*, in elevating their *Mortars*; it is made of two pieces of Wood joined at Right Angles, one of which is longer than the other, that it may enter the Muzzle of the Piece; they are joined by a quarter of a Circle, which is divided into ninety Degrees, the Centre of which is where the two Pieces

**QUADRAT**; to quadrat a Piece, is to see whether it is duly placed in its *Carriage*, and that the *Wheels* be of an equal height.

**QUARTER**, or *Quarters*, has several Significations in *Martial Affairs*.

*Quarter*, signifies the sparing Mens Lives, and giving good Treatment to a vanquish'd Enemy; so it is said the Conquerours offered good *Quarter*: The Enemy asked *Quarter*. We gave no *Quarter*.

*Quarter in general*, is the Ground on which a Body of *Troops* encamp, and signifies likewise the *Troops* encamped; as to beat up the Enemies *Quarter*, is to drive them from their Ground or Encampment; therefore it ought to be in the most convenient Place, as well for the Nature of the Ground, as for the Advantage of entrenching, and the conveniency of Forage and Water.

*Quarter of an Assembly*, is the Place where *Troops* meet for to march



march in a Body, and is the same with a Place of *Rendezvous*.

*Quarter-Guard*, see *Guard*.

*Quarter at a Siege*, is the Encampment upon one of the most principal Passages round about a Place besieged, to prevent Relief and Convoys: When it is commanded by the *General*, it is called the *Head Quarters of the Army*: When the *Camp* is marked out about a Place besieged, then the *Quarters* are said to be disposed: When great Detachments are made from a *Quarter* for Convoys, &c. such a *Quarter* is said to be weaken'd.

*Head Quarters*, is the Place where the *General* of an Army has his *Quarters*: it is generally near the Centre of the Army. The *Quarters* of the *Generals of Horse*, is in the Villages that happen behind the *Right* and *Left Wings*; the *Generals of Foot*, are often in the same Village with the *General*.

*Quarter entrench'd*, is a Place fortified with a *Ditch* and *Parapet*, to secure a *Body* of *Troops*.

*Winter-Quarters*, is sometimes taken for the space of time included between the leaving the *Camp*, and taking the *Field*; but it is more properly the Places where the *Troops* are lodged during the *Winter*. According as the *Troops* are a long or short time in *Garrison*, the *Winter-Quarters* are said to be short or long.

*Quarters of Refreshment*, is the place where the *Troops* that have been much fatigu'd are sent to

refresh themselves, during a part of the *Campaign*; that having refresh'd and recover'd themselves, they may be ready to take the *Field* again.

*Quarter-Master of Horse*, is a Warrant-Officer appointed by the Colonel, he takes up the Ground for the *Troop*, and divides it, in giving so much for each *Tent*; he receives the Orders, keeps a List of the *Troop*, visits the *Stables*, and takes care of the *Arms*. He marches in the *Rear* of the *Troop*, but in *Camp* his *Tent* is pitch'd in the *Front*. In *Winter-quarters* he receives and distributes the *Forage* to the *Troop*: Each *Troop* has a *Quarter-master*.

*Quarter-master of Foot*, is an Officer who takes care of Encamping the Regiment, for there is but one to a Regiment of *Foot*: he attends the *Quartermaster-General* upon a *March*, to know where the Ground is for the Regiment, which he divides among the *Companies*.

*Quartermaster-General*, is a considerable Officer in an Army, and ought to be a judicious Man, and a Man of great Experience, and to understand Geography; and since his Function is to mark the *Marches* and *Encampments* of an Army, he should know the *Country* perfectly well, all the *Rivers*, *Plains*, *Marshes*, *Woods*, *Mountains*, *Passages*, *Defiles*, &c. even to the smallest *Brook*. The *Evening* before a *March*, he receives the Orders and *Rout* from the *General*, and appoints a place for the

*Quar-*

*Quarter-Masters of Foot and Horse*, to meet him next Morning, with whom he marches to the next Camp, where being come, and having viewed the Ground, he marks out to the *Quartermasters* the Ground allow'd each Regiment for their Camp; he chuses the *Head-quarters*, and appoints the Villages for the *General Officers* of the Army, where they shall quarter; he appoints a proper place for the Encampment of the *Train of Artillery*; he carries the Army a Foraging, and plants the *Covering Party*, for their Security at all the Passes round them, and assists in distributing the *Winterquarters* to the Army.

*Quarter-Wheeling of a Body of Men*, is turning the Front where the Flank was; which is done to the Right by the Man on the Right *Angle*, keeping his Ground, and facing about while the rest Wheel.

*Queue d'Ironde*, see *Swallow's Tail*.

*Quit your Arms*, is a word of Command in the *Foot*, when they lay down their Arms, at which they stand up, till they are order'd to the Right about, at which they march clear of their Arms and disperse; but upon the Beat of Drum they run to their Arms with a *Huzza*, having their Swords drawn, and the Point upward.

R.

Ordnance between a *Falconette* and a *Base*, seldom used.

*RACKET*, is a case of Paper rolled very hard on a former of Wood, choaked at one end with a small Cord, and drove full of a Composition of *Meal-powder*, *Saltpetre*, *Sulphur*, and *Coal*, sometimes without *Saltpetre*; it has a small Rod tied to the side of it, called the Tail of the *Racket*; it is covered with a Cap of Paper running to a point, in which are placed Stars, which are a Composition of *Sulphur*, *Saltpetre*, *Meal powder*, and *Camphire*, and other things that can make a clear Fire; when the *Racket* is fired, it cuts the Air with an admirable swiftness, leaving a stream of Fire behind it; when the *Racket* is burned, the Stars take fire, and make a very pleasant Sight.

To *RAISE a Siege*, is to give over the Attack of a Place, and to quit the Works thrown up against it, and the Posts taken about it. As all Enterprizes do not always succeed, so sometimes an Army is forced to raise a Siege, either because of Distempers in the *Camp*, or the unfitness of the Season, for the Rains, Snows, Winds, and cold Weather kills the Men; besides the Besieged may be strongly entrench'd, and receive Supplies of Men and Provisions. If there be no Ground to fear a Sally from the Place, then the Siege may be raised in the day time, by sending first the Sick and Wounded, the *Baggage*, the *Sutlers*, broken

*RABINET*, a small sort of



broken *Cannon* and *Mortars*, and if possible, all the Instruments which have been used in the Siege. The *Artillery* and *Ammunition* may follow, and a strong *Rear-Guard* must face the Besiegers, in case they should offer to charge the *Rear*. But if there be any fear of an Enemy in *Front*, this Order must be altered according to the Prudence of the *General*, and according as the Nature of the Country will allow.

To raise a Plan of a *Fortress*, is the measuring with Cords and Geometrical Instruments, the length of the *Lines*, and the capacity of the *Angles*, that by knowing the length, breadth, and thickness of all the different parts of a *Fortification*, it may be represented in small upon Paper, so as to know the Advantages and Disadvantages of it.

RAMEAU, see *Mine*

RAMMER of a *Gun*, is a piece of Wood fitted to the diameter of the Bore, stuck upon a long Staff, and is used in setting home the Charge and the Wadding.

Rammer, see *Beetle* and *Scourer*.

RAMPART, is an Elevation of Earth round a Place, capable of covering the Buildings from view, and of resisting the *Cannon* of an Enemy, as likewise of raising those that defend it, that they may discover the Country about it. A *Rampart* ought to be sloped on both sides, that is, the Mass of Earth which composes the *Rampart*, ought to be larger at bottom than at top, more or less, according to the nature of

the Earth: It ought to be broad enough to allow the marching of *Waggons* and *Cannon*, besides the *Parapet* which is raised on it; its thickness is generally about 12 fathom, with the *Talus* or *Slope*. The Earth which makes the *Rampart*, is taken from the outside of it, because then the *Rampart* and *Foss* are made at the same time; from which it follows, that their Proportions depend on one another; for since the *Rampart* is made of a certain bigness, the *Foss* must be dug deep enough to afford Earth for the *Rampart*, the *Parapet*, and the *Esplanade*.

RENDEZVOUS, is the Place appointed by the *General*, where all the *Troops* which are to compose his Army are to meet at a day prefix'd, notwithstanding Wind, Rain, Snow, Cold, or other Chances of the Weather.

RANK, is the Order or streight Line made by the *Soldiers* of a *Battalion* or *Squadron*, drawn up side by side; this Order was established for the *Marches*, and for regulating the different Bodies of *Troops* and *Officers* which compose an *Army* or a *Battalion*. Doubling of the *Ranks*, is the putting two *Ranks* into one.

RATION, is a Portion of *Ammunition*, Bread or Forage, distributed to every Man in the *Army*. A *Foot Soldier* receives a *Ration* of Bread, which is a pound and a half for each day; and a *Trooper* a *Ration* of Bread, and another of Forage.

**RAVELINS**, are Works raised on the *Counterſcarp* before the *Curtin* of a Place, and ſerve to cover the Gates of a Town and the Bridges. They conſiſt of two *Faces* forming a *Saillant Angle*, and are defended by the *Faces* of the Neighbouring *Baſtions*. The *Half-Moons* which cover the point of the *Baſtions*, have their Defences from the *Ravelins*. They are the moſt in uſe of all *Out-Works*, and are by the *Soldiers* moſt commonly called *Half-Moons*. They ought to be lower than the Works of the Place, that they may be under the Fire of the Beſieged, in caſe the Enemy ſhould endeavour to lodge themſelves there. Their *Parapets*, as thoſe of all *Out-Works*, ought to be *Cannon-Proof*; that is to ſay, about 18 foot thick; their *Ramparts* ought to be the half or third of one of the *Flanks* of the Place, and the breadth of their *Moats* half the breadth of the *Moat* of the Place.

**RAZANT**, *Line of Defence* *Razant*, ſee *Line*.

**REAR** of an *Army*, or of a *Battalion*, ſignifies generally, either the hindmoſt part of the *Army*, or *Battalion*, or the Ground behind it.

*Rear-Guard*, is that *Body* of the *Army* which marches after the *Main Body*; for the March of an *Army* is always compoſed of an *Avanc'd Guard*, a *Main Body*, and a *Rear-Guard*; the firſt and laſt commanded by a *General* Perſon. The *Old Grand Guards* of the

*Camp*, are always the *Rear-Guard* of the *Army*, and are to ſee that every thing come ſafe up to the *New Camp*.

*Rear-Half Files*, are the three hindmoſt Ranks of a *Battalion*, when it is drawn up ſix deep.

*Rear-Line* of an *Army* encamp'd, or *ſecond Line*, is always 400 or 500 yards diſtant from the firſt *Line*, which is likewiſe called the *Front Line*; theſe two *Lines* run parallel, and have ſometimes a third, which is called the *Reſerve*.

*Rear-Rank*, is the laſt *Rank* of a *Battalion*, when drawn up.

**RECOILE**, or *Reverse of a Gun*, is its running back when fired, which is occaſion'd by the ſtruggling of the Powder in the Chamber, and its ſeeking every way to fly out. *Guns*, whoſe Vents are a little forward in the *Chace*, recoile moſt. To leſſen the *Recoile* of a *Gun*, the *Platforms* are generally made ſloping towards the *Embraſures* of the *Battery*.

**RECRUITS**, are new Men raiſed to ſupply the Places of ſuch as have loſt their Lives in the Service, or are rendred unſerviceable by Age or Wounds. *Recruit Horſes*, are the *Horſes* brought up for compleating the *Regiments* of *Horſe* or *Dragoons* every year.

**RECTANGLE**, ſee *Angle*.

**REDANS**, or *Indented Works*, are *Lines* or *Faces* forming *Sallying* and *Re-entring Angles* flanking one another, and are generally uſed on the ſides of a *River* which runs through a *Garrison* *Town*.



Town. They were used before *Bastions* were, and are by some thought preferable to them.

**REDOUBTS**, are square Works of Stone raised without the *Glacis* of a Place, about *Musquet-Shot* from the Town, with a *Foss* round 'em, having *Loop-holes* for the *Musquetiers* to fire thro; sometimes they are of Earth, having only a Defence in Front, surrounded with a *Parapet* and *Foss*: both the one and the other serve for *Detached Guards* to interrupt the Enemies Works. They are sometimes made for the *Angles* of the *Trenches*, for covering the Work men against the *Sallies* of the *Garrison*. The length of their Sides may be from ten to twenty fathom; their *Parapet*, having two or three *Banquerts*, must be about nine or ten foot thick, and their *Foss* the same, both in breadth and deepness; they contain a Body of Men for the Guard of the *Trenches*, and are likewise called *Places of Arms*.

**REDUCE** a Place, is to oblige the *Governour* to surrender it to the *Besiegers*, by *Capitulation*.

**REDUIT**, *Castle* or *Donjon*, is a Place more particularly entrenched and separated from the rest by a *Foss*. There is generally in each of them a high Tower, from whence the Country round the Place may be discovered.

**REFORM**; to reform, is to reduce a Body of Men, by either disbanding the whole, or only breaking a part, and retaining the rest; or sometimes by incor-

porating them into other *Regiments*.

**REFORM'D-OFFICER**, is one whose *Troop* or *Company* is broke; and he continued in whole or half Pay, doing Duty in the *Regiment*; he preserves his Right of Seniority, and continues in the way of *Preferment*.

**REGIMENT**, is a Body of Men either Horse or Foot, commanded by a *Colonel*, *Lieutenant-Colonel*, and *Major*; each *Regiment* of Foot is divided into *Companies*, but the number of *Companies* differs; though in *England* our *Regiments* are generally thirteen *Companies*, one of which is always *Grenadiers*. *Regiments* of Horse are most commonly six *Troops*, but some of nine. *Dragoon-Regiments*, are generally in time of War eight *Troops*, and in time of Peace but six. Each *Regiment* has a *Chaplain*; and a *Surgeon*. Some *German Regiments* consist of 2000 Foot, and the *Regiment* of *Piccardy* in *France* of 6000, being 120 *Companies*, at 50 in a *Company*.

*Regiment of Guards*, see *Guards*.

**REGULAR-ATTACKS**, are such as are made in form, that is, by *Regular-Approaches*.

**REINFORCED-RING** of a *Gun*, is that next the *Trunions*, betwixt them and the *Vent*. The reinforced part of a *Gun*, is from the *Base-Ring* to the *Reinforced-Ring*, being much thicker of Metal than any other part of the Piece, because of the great force of the *Powder*.



**REINFORCEMENT** *to an Army*, is an Addition of fresh *Troops* to strengthen an *Army*, and so that no *Officer* ought to think to enable them to go on with an *Enterprize*.

**RELAIS**, see *Liziere*.

**RELIEVE**; *to Relieve the Guard*, is to put fresh Men upon the *Guard*. *To relieve the Trenches*, is to relieve the *Guard* of the *Trenches*, by sending off those that have been there upon Duty before.

**REMOUNT**; *to remount the Cavalry or Dragoons*, is to furnish them with Horses in the room of those which have been either killed or disabled.

**RESERVE**, is a Body of *Troops* sometimes drawn out of the *Army*, and encamped by themselves in a *Line* behind the other two *Lines*. See *Camp*.

**RETIRADE**, is a *Trench* with a *Parapet*. But *Retirade* or *Coupure*, is most ordinarily taken for a *Retrenchment* formed by the two *Faces* of a *Re-entring Angle* in the Body of a Place, after the first Defence is ruined, and the *Besieged* obliged to abandon the *Head* of the Work, without quitting it entirely; therefore while some are making *Head* to the *Enemy*, others ought to be busied in making the *Retirade*, which is only a simple *Barricade* or *Retrenchment* thrown up in haste, with a sort of *Foss* before it; it depends upon the Knowledge of the *Engineer* to direct, and the Honour of the *Officers* and *Soldiers* to

work at such a time, since they do it for the Defence of their Liberty; and so that no *Officer* ought to think to carry *Fascines*, or to throw up Earth to cover himself. The *Retirade* ought to be raised as high as possible; and some *Fourneaus* or *Fougades* made under it, to blow up the *Enemies Lodgments*.

**RETRAITE**, or *Berm*, see *Liziere*.

**RETREAT**, or *Tattou*, is a Beat of the *Drum* in the evening at the firing of a Piece, called the *Warning-Piece*, at which the *Drum-Major*, with all the *Drums* of the *Battalion*, except such as are upon Duty, beats round the *Regiment*; the *Drums* of the *Quarter-Guards*, of the *General's Guards*, and all other small *Guards*, do likewise beat, the *Trumpets* at the same time sounding at the *Head* of their respective *Troops*. This is to warn the *Soldiers* to forbear firing, and the *Centries* to challenge till break of Day, that the *Reveille* is beat. The *Retreat* is likewise called setting the *Watch*.

**RETRENCHMENT**, is any Work raised to cover a *Post*, and fortified it against an *Enemy*, such as *Fascines* loaded with *Earth*, *Gabions*, *Barrels* of *Earth*, *Sand-bags*, and generally all things that can cover the Men, and give a stop to the *Enemy*. But it is more particularly applicable to a *Foss* bordered with a *Parapet*; and a *Post* fortified thus, is called



*Post retrench'd, or strong Post.* *Retrenchments* are either general or particular.

*General Retrenchments*, are new *Fortifications* made in a Place besieged, for to cover themselves when the Enemy becomes Masters of a *Lodgment* on the *Fortification*, that they may be in a Condition of disputing the Ground inch by inch, and of putting a stop to the Enemy's Progress, in expectation of Relief. As, if the Besieged attack a *Tenaille* of the Place which they judge the weakest, either by its being ill flanked, or being commanded by some Neighbouring Ground; then the Besiegers make a great *Retrenchment*, inclosing all that part which they judge in most Danger, as you may see in the general *Plan*. These ought to be fortified with *Bastions* and *Demi bastions*, with a good *Foss*, and ought to be higher than the Works of the Place, that they may command the old Works, and put the Besiegers to a great trouble in covering themselves; they ought likewise to be *Countermined*.

*Particular Retrenchments*, are such as are made in the *Bastions*, when the Enemy are Masters of the *Breach*. They can never be made but in full *Bastions*, for in empty or hollow *Bastions* there can be made only *Retirades*. These particular *Retrenchments* are made several ways, according to the time they have to cover themselves; sometimes they are made before hand, which is cer-

tainly the best; as Count *Pagan* who makes a double *Parapet* in all his *Bastions*; and a *Retrenchment* made before hand, requires no more Men for its Defence, than if it were not made, because they never defend it till the principal Work be lost. The *Parapets* of such *Retrenchments* ought to be 5 or 6 foot thick, and 5 foot high, with a large and deep *Foss*, from whence ought to run out small *Fougades* and *Countermines*.

RETURNS of a *Mine*, are the Turnings and Windings of the *Gallery*; see *Gallery* and *Mine*.

*Returns of a Trench*, are the Turnings and Windings which form the Lines of the *Trench*, and are as near as they can be made parallel to the Place attacked, to shun being enfiladed. These *Returns* when followed, make a long way from the end of the *Trench* to the Head, which going the streight way is very short, but then the Men are exposed; yet upon a *Sally*, the best Men never consider the Danger, but getting over the *Trench* with such as will follow them, take the shortest way to repulse the Enemy, and to cut off their Retreat if possible.

REVEILLE, is a Beat of the *Drum* about break of day, to advertise the *Army* that it is day light, and that the *Centries* forbear challenging.

REVERSE, signifies on the back, or behind. So we say a



*Reverse View*, a *Reverse command-ground*, a *Reverse Battery*, &c.

*Reverse of a Gun*, see *Recoile*.

**REVIEW**, is the drawing out of the *Army*, or part of the *Army* in *Line of Battel*, to be viewed by the *General*, that he may know the *Condition* of the *Troops*.

**RHILAND-ROD**, is a Measure of two fathom or twelve foot, used by the *Dutch Engineers*.

**RHOMB**, is a four sided Figure, whose *Sides* are equal, but the *Angles* unequal.

**RHOMBOIDE**, is a four sided Figure, whose *Angles* and opposite *Sides* are equal, but all its four sides are not equal.

**RIDEAU**, is a *Rising Ground* or *Eminence* commanding a *Plain*, which is sometimes near parallel to the *Works* of a *Place*. It is a great *Disadvantage* to have *Rideaus* near a *Fortification*, especially when they shoot from far, and terminate on the *Counterscarp*; for they not only command the *Place*, but likewise facilitate the *Enemies Approaches*.

*Rideau*, is likewise a *Trench* covered with *Earth*, in form of a *Parapet* to cover the *Soldiers*.

**ROLL**; *Muster-Roll*, is a scroll of *Parchment*, which each *Captain* gives the *Muster-Master*, on which are writ the *Names* of the *Soldiers* of his *Company*.

*To roll in Duty*, is when *Officers* of the same *Rank* take their turns upon *Duty*, as *Captains* with

*Captains*, and *Subalterns* with *Subalterns*, and command according to the *Seniority* of their *Commissions*.

**ROLLERS**, are round pieces of *Wood* of about 9 inches diameter, and four foot long, which serve in moving *Mortars* from one place to another when it is near, by raising the fore part of the *Bed* so high that one of these *Rollers* may be laid under it, then pushing the *Bed* forwards, and laying another in its way, and another before that, and so on: Thus the *Mortar* is with little trouble brought to another place.

**ROPE**; for *Gin-Rope*, see *Gin*; and for *Draught-Ropes*, see *Draught-Hooks*.

**ROUND**, is a *Night Watch* commanded by an *Officer* that goes round the *Rampart* of a *Garrison*, to listen if any thing be stirring without the *Works*, to see that the *Centries* be watchful and diligent upon their *Duty*, and that every thing be in order: In strict *Garrisons*, the *Rounds* go every quarter of an hour, that the *Rampart* may still be furnished: The *Centries* ought to challenge at a distance, and are to rest their *Arms* as the *Round* passes, letting no *Man* come near them. When the *Round* is near the *Corps de Garde*, the *Centry* calls aloud, *Who comes there*; when it is answered, *the Round*; he says *stand*, and calls for the *Corporal* of the *Guard*, who drawing his *Sword* calls, *who comes there*, and is answered *the Round*; then, *let him*



who has the Word advance. The *Corporal* receives the Word with his Sword drawn, and pointed at the Heart of him who gives it.

When the *Major* goes the *Round*, the *Officers* of the *Guard* receive him with two *Musqueteers*, and give him the Word only once, which is when he goes his *Round-Major*. When the *Governour* goes his *Round*, the *Officers* draw out the *Guard* without *Arms*, and send four *Musqueteers* to receive him at ten Paces distance, and give him the Word as often as he pleases to demand it: All other *Rounds*, without exception, are obliged to give the Word to the *Corporal* of the *Guard*.

To *RUN the Gauntlet*, is a punishment for considerable Offences; when a *Soldier* is sentenced to run the *Gauntlet*, the *Regiment* is drawn out and make a Lane, each *Soldier* having a *Switch* in his hand; the *Criminal's* Shoulders and Back are naked, and as he runs along, every one has a stroak at him; while he runs, the *Drums* beat at each end of the Lane; sometimes he runs 3 times, sometimes 5, and sometimes 7 times, according to the Nature of the Offence.

## S.

*SAFE-GUARD*, is a Protection granted by a *Prince* or his *General* to some of the *Enemies* Lands, to preserve 'em from being plunder'd. It signifies likewise a *Trooper* who stays, at the en-

try of a Place protected, to hinder *Soldiers* which straggle off from the *Army*, from committing any Disorder.

*SAKER*, is a Piece of Ordnance, carrying a *Ball* of 5 pound and a quarter weight; the diameter of the *Bore* is 3 inches and 9 sixteenths of an inch; the length of the *Gun* about 8 or 9 foot; it is a very good Field Piece, and is always a part of the marching *Artillery*.

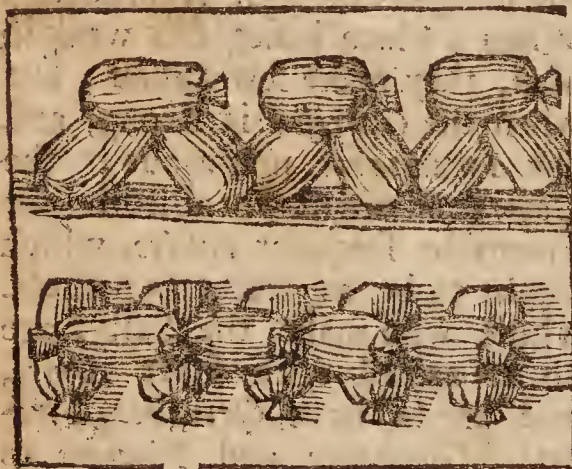
*SALLY*, is when the Besieged march out a part of the *Garrison* in the night time, to attack the *Besiegers* in their Works, to nail their *Guns*, and to hinder the Progress of their Approaches. When a Place besieged is weak in Men, they make few *Sallies*; but when the *Garrison* is strong, and the *Inhabitants* numerous, the *Governour* ought to disturb the *Enemy* by frequent *Sallies*, which ought to be as secret as possible. Those who make the *Sally*, are to be armed with short *Arms*, and are to have *Grenades*, *Fire-pots*, *Gouderons* and *Pioneers* to destroy and level the *Enemies* Works.

To *SALUTE* a *Prince* or *Person* of extraordinary Quality at his coming into a *Garrison*, is the firing of the *Cannon* round the Place: likewise in the Field when a *Regiment* is to be viewed by a *King* or his *General*, the *Drums* beat a March as he approaches, and the *Officers* salute one after another as he passes by, stepping back with the right Foot and



Hand, and bowing the spears of their *Half Pikes* to the Ground, and afterwards recovering them gently, and bringing up the Foot and Hand and planting them. As soon as they have saluted, they are to pull off their Hats without bowing, but standing upright. The *Ensigns* salute all together, bringing down their *Colours* near the Ground directly before them at one Motion, and having taken them up again gently, lift their Hats. If it be a Review of the *Army*, every *Battalion* is to salute with *Pikes* and *Musquets* charg'd.

**SAND-BAGS**, are *Bags* con-



taining about a cubical foot of Earth; they are used for raising *Parapets* in haste, or to repair what is beaten down; they are of use when the Ground is rocky, and affords no Earth to carry on their Approaches, because they can be easily brought from far off, and removed at will. The smaller *Sand-bags* hold about half a cubical foot of Earth, and serve to be placed upon the *Superior Talus* of the *Parapet*, to cover

those that are behind, who fire through the *Embrasures* or *Intervals* which are left betwixt them.

**SAP**, is the digging deep under the Earth, in sinking lower by degrees, to pass under the *Glacis*, and open a way to come under Cover to the Passage of the *Moat*. After they have overcome all the Obstacles which the Besieged have opposed to hinder the Advancement of their Approaches, and that notwithstanding their frequent Sallies, they are at last got near the Foot of the *Glacis*, the *Trench* is carried directly forwards, the Work-men covering themselves the best way they can, with *Blinds*, *Woolpacks*, *Sand-bags*, or *Mantelets* upon *Wheels*; when they are got to the Foot of the *Glacis*, they make *Epaulments* or *Traverses* on each side to lodge a good Body of Men. The *Sap* is made five or six fathom from the *Salliant Angle* of the *Glacis*, where the Men are only cover'd side-ways, wherefore they lay Planks over head, with Hurdles and Earth above them. Having by this means obliged the Enemy to quit the *Covert-Way*, the *Pioneers*, with *Mantelets*, *Wool-packs*, or *Sand-bags*, make immediately a *Lodgment*, covering themselves the most advantageously they can, from the Fire of the opposite *Bastion*.

**SARRAZINE**, is the same with *Herse* or *Portcullis*, see *Herse*.

**SAUCISSE**, is a long train of *Powder* sewed up in a Roll of pitch'd



pitch'd Cloath, of about two inches diameter; the use of it is to fire *Mines*, or *Caissons*; the length of it must reach from the *Mine* to the place where the *Engineer* is to fire it, to spring the *Mine*.

**SAUCISSONS**, are *Faggots* or *Fascines*, used in covering of Men, or making *Epaulments*. They differ from the ordinary *Fascines*, because they are made of thicker Wood or Branches of Trees, and tied at both ends and in the middle, and are about a foot and a half or two foot thick, and four foot long. They are good to stop Passages, and being mixed with *Earth* and *Fascines* to make *Traverses* over a wet *Ditch*.

**STALADE**, or *Escalade*, is a furious Attack upon a *Wall* or *Rampart*, contrary to Form, and with no Precaution, carried on with *Ladders*, to insult the *Wall* by open Force.

**SCALE**, is a right Line divided into equal Parts, representing Miles, Fathoms, Paces, Feet, Inches, or any other Measure; it is used in making *Plans* upon Paper, in giving each Line its true Length.

**SCALENE**, see *Triangle*.

**SCARP**, or *Escarpe*, is the *Interior Talus* or *Slope* of the *Ditch* next the Place, at the Foot of the *Rampart* or *Liziere*.

**SCHENOGRAPHY**, which is likewise called *Profile* or *View*, is the natural Representation of a Place, such as it appears to us, when we look upon it, from

without, considering its Situation, the Form of its Walls, the Number and Figure of its Steeples, and the Tops of its Buildings, both Publick and Private.

To **SCOUR** a *Line*, is to flank it so as to see directly along it, that a *Musquet-Ball* entering at one end, may fly to the other, leaving no place of Security.

**SCOURER** or *Rammer*, is that wherewith a *Soldier* rams down the *Powder* and *Ball* into his Piece.

**SENIORITY**, is the difference of time betwixt the raising of two *Regiments*, whereby the one is said to be so much Senior than the other; all *Regiments* take place according to Seniority. The difference of time betwixt the Date of two *Commissions* makes the one Senior to the other; and all *Officers* of the same Rank, roll by the Seniority of their *Commissions*.

**SENTINEL**, see *Gentinel*.

**SERJEANTS**, are *Staff-Officers* in a *Company* of *Foot*, and ought to be vigilant and active in their Business; they ought to Read and Write, because they are obliged to keep a List of the *Soldiers* and their *Lodgings*, and to visit them often; they are to teach the *Company* the Exercise of their *Arms*, and how they are to keep their *Ranks* and *Files*; their Post on a March is on the *Flanks*, to cause the *Company* to march in good Order. A *Serjeant* of each *Company* is to be on the *Parade*

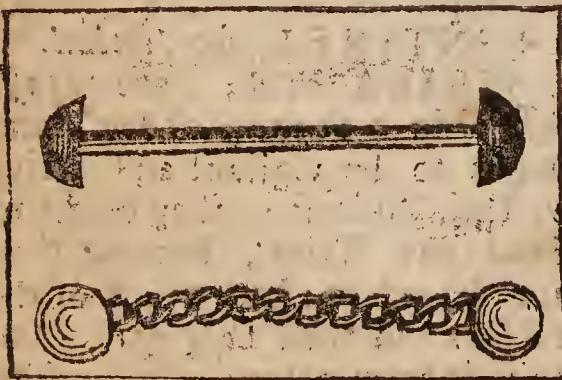


at night, to receive the Orders and the Word from the *Adjutant*, which he is to carry to his *Captains* and *Subalterns*: When the *Adjutant* comes, the *Serjeants* place themselves in a Ring with him, according to the precedency of their *Companies*, with their Hats on the Spears of their *Halbards*; and after he has given them the Orders, he whispers the Word to the first *Serjeant*, who gives it to the next, and so on, till it come to the youngest, who gives it to the *Adjutant*. They acquaint the *Officers* that are to go next upon Duty; they visit the *Mens Arms*, and distribute Ammunition to them.

**SHAFTS** of *Limbers*, see *Limbers*.

**SHOT**; all sorts of *Ball*, either for *Cannon*, or for *Musquets*, *Carabines* and *Pistols*, see *Ball*.

*Chain-Shot*, is two whole or half



Bullets joined together, either by a Bar or Chain of Iron, which allows them some liberty asunder, so that they cut and destroy whatever happens in their way, and are very serviceable in a Sea Battle, to cut the Enemies Sails.

**SHOVEL**, is an Instrument carried along with an *Artillery*, to be delivered out to the *Pioneers* who are to mend the Ways, or to work in the Approaches; it serves to gather and throw up the Earth which the *Pick-ax* and *Mattock* raise; it is made of a Shaft of about three foot and a half long; the Head of it which is thin and shod with Iron, is about fifteen inches deep, and eight broad.

**SHOULDER** of a *Bastion*; is where the *Face* and the *Flank* meet.

**SIDES** of *Horn-works*, *Tenailles*, *Crown-works*, &c. are those parts of their *Ramparts* which reach from the Border of the *Foss* of the Place, to the Head of the Work, which in *Horn-works* and *Tenails* are parallel; sometimes these Sides are no longer than the reach of a *Musquet-Shot*, and are then defended from the *Faces* of the Place; but when they are longer, they have either *Flanks* made in the long Sides, which are then said to have *Shoulders*; or else they are indented or made with *Redans*, or with *Traverses* or cross *Entrenchments* in the *Ditch*.

**SIEGE**, is the Encampment of an *Army* entrenched and fortified round a place which is attacked, with a Design to take it. When a *General* designs to besiege a Place, he must first order it to be invested by a Body of *Horse*, under the Command of a *Lieutenant*



*nant-General*, to hinder any Succours getting into the Place, till the rest of the *Army* arrive. The method of encamping, is quite otherwise in a *Siege* than in a *March*; for in a *Siege* the *Army* environs the Place that nothing may enter, and lies without *Canon-Shot* of the Town. If the Place be situated on a River, a *Detachment* is made of a part of the *Army* to the other side; and there are *Bridges of Communication* made both above and below the Town, with *Redoubts* guarded by a *Body of Foot* to secure them. If the Place be environ'd with Mountains, they possess all the Heights from whence they can any way annoy the Enemy. At a *Siege* the *Army* encamps with their Backs to the Place; *Battalions* and *Squadrons* interlin'd. The *Engineers* trace the *Lines of Circumvallation* and *Contrevallation*, with *Redoubts* and *Angles*, at convenient distances, and every *Regiment* works at the Place appointed them. The *Line of Circumvallation* is without the *Camp* to hinder Succours. The *Line of Contrevallation*, is that betwixt the *Army* and the Place, which covers the Besiegers from the *Sallies* of the *Garrison*. When the *General* has disposed his *Camps*, placed his *Guards*, as well towards the Place, as towards the Country, and established the *Lieutenant-Generals* to command in the particular *Quarters*, with

Orders what they are to do: He goes with the *Engineers* to view the Place, and orders the Attack in the Place he judges the weakest; but because it is difficult to find two places situated after the same manner, so it is hard to make two *Sieges* after the same way; for there are some Towns, where without opening or carrying on of *Trenches*, the Besiegers come at once and lodge themselves on the *Counterscarp*, by the help of some *Hollow Ways*, *Ruins* or *Cavities*, or by some ill fortified *Suburbs*. And there are others, where the Ground is better managed, where within *Canon-Shot* of the *Out-Works*, there is nothing which can facilitate the Enemies Approaches. To such sort of places, which are not the worst, there must be *Trenches* and *Approaches* to gain the Ground foot by foot, which renders such *Sieges* dangerous and very long, because of many Accidents which happen daily in the *Attacks*, *Sallies*, and *Mines*, and other Accidents of *War*.

To make or form a *Siege*, there must be an *Army* sufficient to furnish five or six *Reliefs* for the *Trenches*, *Pioneers*, *Guards*, *Convoys*, *Escorts*, and what else may happen: An *Artillery* with *Magazines* furnished with a sufficient quantity of Warlike *Ammunition*, and *Provisions* of all sorts: And an *Hospital* with *Physicians*, *Chirurgeons*, &c. and *Med'cines* of all sorts.



*To raise a Siege*, is to give over attacking a Place, in abandoning the Works, and levelling the Works or Posts which they were in possession of before the place.

*To turn a Siege into a Blockade*, is to give over the Attacks, and to possess themselves of all the Avenues leading to the Place, to hinder any *Succours* or *Convoys* getting into it, with a Design to take it by Famine.

**SILLON**, is a Work raised in the middle of a *Foss*, to defend it when it is too wide: It has no particular Form, sometimes being made with little *Bastions*, *Half-Moons*, and *Redans*, which are lower than the Works of the Place, but higher than the *Covert-Way*. The Towns of *Doway* and *Bruges* in *Flanders*, are both fortified this way. The Word *Sillon*, is wearing out of Use, being now called *Envelope*. See *Envelope*.

**SINGLE Tenaille**, see *Tenaille*.

**SIXAIN**, an antient Order of Battel for six *Battalions*, which, supposing them all in a Line, is formed thus. The second and fifth *Battalions* advance and make the *Van*; the first and sixth fall to the *Rear*, leaving the third and fourth to form the *Body*. Each *Battalion* ought to have a *Squadron* on its Right, and another on its Left. Any number of *Battalions* produced of the number six, may be drawn up by this Order; so 12 *Battalions* may

be put in two *Sixains*, and 18 *Battalions* in three *Sixains*.

**SKIRMISH**, a sudden Encounter between two small Bodies of Men, without Order.

**SOLDIER**, is he who is list-ed in the Service, and receives Pay; he who serves on Foot, is commonly called a *Soldier*; and he who serves on Horse-back, a *Trooper*.

**SOUND**, see *Trumpet*.

**SPADE**, is an Instrument for digging up the Ground; the Handle or Shaft is about three foot long; the Head of it is all of Iron, the upper part being flat for the *Pioneer* to set his Foot on to force it into the Ground; the length of the Head is a foot or fifteen inches, and the breadth six or eight.

*To SPIN Hay* is to twist it up in Ropes very hard for an Expedition in the Winter time; each *Trooper* carrying as much as he can behind him.

**SPOKES** of a *Wheel* of a *Canon*, are those short pieces of Wood, being twelve in number; which by having one end fixed in the *Fellows*, and the other in the *Nave*, keep the *Nave* in the Centre, and make the *Wheel*.

**SPUNGE** of a *Gun*, is a long Staff put into a roll of Wood, which is covered over with a Sheep-skin, the Wool outwards, to sponge and clean the *Gun*. As soon as the *Gun* has fired, a *Matross* is ready with the *Sponge*, while another claps his Finger on



On the Vent to stop the Air, and stifle what Fire may remain in the Chamber. The *Sponge*, *Rammer*, and *Ladle*, after the *Gun* is loaded, are laid under her betwixt the *Wheels*.

**SQUADRON**, is a small *Body* of *Horse*, composed of 3 *Troops*, each 50 *Troopers*, making 150, and sometimes 200, when the *Troops* are larger, but never above that; because a greater number can never be advantageously posted, nor have room to act in narrow Grounds, as *Woods*, *Marshes*, and *Defiles*. The eldest *Troop* takes always the Right of the *Squadron*; the second the Left, and the youngest the Centre. A *Squadron* is always drawn up three deep, that is to say, in three *Ranks*; having the length of a *Horse*, or rather more between *Rank* and *Rank*. The *Standard* is always in the Centre of the first *Rank*. When the *Army* is encamped, a *Squadron* of *Horse* is allowed 30 Paces for their Front, and 30 paces Interval between one *Squadron* and another; on a March the *Squadrons* of the same *Column* ought to keep a convenient distance.

**SQUARE**, is a Figure composed of four equal *Sides*, and four right *Angles*.

*Long Square*, is a Figure composed of four *Sides*, whereof the two opposite are equal, and all the *Angles* Right *Angles*.

*Square Battalion of Men*, is that which is composed of an equal

number of Men in *Rank* or *File*, or when the number of Men in each *File*, is equal to the number of Men in each *Rank*. *Square Battalion of Ground*, is when the Ground of the *Flanks* is of the same Extent, as the Ground of the *Front* and *Rear*. To make a *Square Battalion* of Men, whose number is known, as 50, take the nearest *Radix* or *square Root*, which is seven, for the number of Men in *Rank* and *File*. To make a *Square Battalion* of Ground, the number being likewise determin'd, as 60, *Manesson Mallet* says that Number must be multiplied by 3, which is the number of feet that every Man takes in *Front*, and the Product 180 divided by 7, which is the number of feet that each Man taketh up in deepness, or the distance of the *Ranks*; the Quotient is 25; the *square Root* of which is 5, which is the number of Men in each *File*; and if by this *Radix* 5, you divide 60, the Quotient is 12 for the number of Men in each *Rank*.

*Hollow Square*, is a *Body* of *Foot* drawn up with an empty space in the middle for the *Colours*, *Drums* and *Baggage*, facing, and covered by the *Pikes* every way, to oppose the *Horse*.

**STAFF-OFFICER**, see *Officer*.

**STANDARD**, is a piece of *Silk* or *Damask*, about a foot and a half square; on which is embroidered, the *Arms*, *Device*, or *Cypher* of the *Prince*, or of the *Colonel*,



*Colonel* : It is fixed on a Launce of about 8 or 9 foot long, and carried in the Centre of the first Rank of the *Squadron*; in Rainy or bad weather, it has a Case of Leather over it to preserve it.

**STAR-REDOUTS** are now out of use, both because their *Re-entring Angle* is not well flanked, and because the square *Redoubts* are sooner raised, and equally serviceable. They were made with *Salliant* and *Re-entring Angles*, and had from five to eight Points; and each of their Sides or Faces was from 12 to 25 fathom long.

**STORM**, see *Affault*.

**STRAIKS**, are strong Plates of Iron six in number, fixed with large Nails, called *Straih-Nails*, on the Circumference of a *Canon Wheel*, over the Joints of the *Fellows*, both to strengthen the *Wheel*, and to save the *Fellows* from wearing out on hard Ways or Streets.

**SUBALTERN-OFFICERS**, see *Officers*

**SUB-BRIGADEER**, is a Post in the *Troops* of *Guards*, next under a *Brigadeer*.

*Sub Lieutenant*, is an *Officer* in *Regiments* of *Fuseleers* where there are no *Ensigns*, having a Commission as youngest *Lieutenant*, and Pay only as *Ensign*; but takes place of all *Ensigns*, except the *Guards*.

*Subsistence*, is the Money paid to the *Soldiers* weekly, not amounting to their full Pay, be-

cause their Cloaths, *Acoutrements*, *Tents*, *Bread*, &c. are to be paid; it is likewise the *Money* paid the *Officers* upon *Accompt*, till their *Accompts* be made up, which is generally once a year, and then they are paid their *Arrears*, which signifies the *Money* they were behind.

*Sub-divisions*, are the lesser *Parcels*, into which a *Regiment* is divided in marching, being half the greater *Divisions*.

**SUCCOUR**, is the *Enterprise* made to relieve a *Place*, that is, to raise the *Siege*, and force the *Enemy* from it.

**SURFACE** or *Superficies*, is an *Extent*, having *Length* and *Breadth*, but no *Thickness*: It is evident, that the *Extremities* of a *Surface* are *Lines*.

*Surface*, as a *Term* in *Fortification*, is that part of the *Exterior Side*, which is terminated by the *Flank* prolong'd or extended, and the *Angle* of the nearest *Bastion*. The *Double* of this *Line* with the *Curtin*, is equal to the *Exterior Side*.

**SUTLER**, is he who follows the *Army* to sell all sorts of *Provisions* to the *Troops*. They pitch in the *Rear* of each *Regiment*, and about the *Generals Quarters*; their *Beer*, *Wine*, *Bread*, &c. they either buy from the *Boors*, or fetch from the nearest *Towns*.

**SWALLOWS-TAIL**, is an *Out-Work* differing only from a single *Tenaille*, in that its *Sides* are not parallel, like those of a *Tenaille*; but



but if prolong'd, would meet and form an *Angle* on the middle of the *Curtin*; its *Head* or *Front* is composed of two *Faces* forming a *Re-entring Angle*. This Work is extraordinary well flanked and defended by the Works of the Place, which discover all the Length of its long Sides. But their great Fault is their not covering sufficiently the *Flanks* of the opposite *Bastions*.

## T.

*TAIL* of the *Trenches*, or *Opening of the Trenches*, is the Post where the *Besiegers* begin to break Ground to cover themselves from the Fire of the Place, in advancing the *Lines of Approach*; see *Opening of the Trenches*.

*TALUS* or *Epatement*, is the Slope given to the *Rampart* or *Wall*, that it may stand the faster, and is more or less according as the Earth is looser or more binding. All *Ramparts* ought to have a *Slope* or *Talus* on each side; that is, they ought to be broader at the *Basis*, than at the *Top*: the one is called the *Exterior Talus*, the other the *Interior Talus*. And there is likewise a *Superior Talus*. See *Profile*.

*Exterior Talus*, is the Slope given to a Work, one the side towards the Country, and ought to be as small as possible, that the Enemy may not find it easie to be mounted, either by *Scalade* or otherwise. But if the Earth be

not good, the *Talus* must be large, that it may keep it up the better. In such a case it were good to support the Earth with a Wall, which the *French* call *Chemise*, when it is not thick, and otherwise *Revetement*, which signifies cloathing or fencing, to make the Earth last longer, and to save the making too large a *Talus*. This *Wall* ought to have a small *Talus* of a fifth or sixth part of its height, and for a Reinforcement it is generally supported in the inside by *Counter-forts*, or a sort of *Buttresses*.

*Interior Talus*, is the Slope of the inside of the Work next the Town, which is much larger than that of the outside; and has at the *Angles* of the *Gorge*, and sometimes in the middle of the *Curtin*, *Ramps*, or *sloping Roads*, to mount upon the *Terre-plein* of the *Rampart*. The *Interior Talus* of the *Parapet*, ought to be very small, that the Men may with more ease fire over it. See *Profile*.

*Superior Talus* of the *Parapet*, is the Slope on the top of the *Parapet*, marked 13, 12, in the Figure at *Profile*. This Slope allows the *Soldiers* to defend the *Covert Way* with small *Shot*, which they could not do were it level.

*Tarpaulins*, are pitched Cloths, with which the Decks of Ships where there are Stores are covered, to save them from Rain; or to throw over Stores in open Boats,



Boats, or upon Battery, or in Magazines.

TATTOU, see *Retreat*.

TEMOINS, is a French Term for the pieces of Earth left standing as Marks or Witnesses, in the Fosses of Places they are emptying, to the end they may know exactly, how many cubical fathoms or feet of Earth has been carried away, thereby to pay the Work-men, who are always sure to leave some of the highest spots of Ground for *Temoins*, to have more deepness to measure. But the *Engineers* are generally careful to mark out indifferent Places, some high, some low, to measure as exact as they can.

TENAILLE, is an *Out-Work* longer than broad, whose long Sides are parallel; and is either single or double. There are likewise *Tenailles* in the Foss.

*Single Tenaille*, is a Work whose *Front* is advanced towards the Country, having two *Faces* forming a *Re entring Angle*; its two long Sides terminate on the *Counterscarp*, opposite to the *Angle* of the *Shoulder*.

*Double Tenaille*, is a Work whose *Front* having four *Faces*, forms two *Re entring*, and three *Salliant Angles*; its long Sides are likewise parallel, and terminate on the *Counterscarp*, opposite to the *Angle* of the *Shoulder*. Both the single and double *Tenailles* have this fault, that they are not flanked or defended at the *Re entring Angle*, because the height

of the *Parapet* hinders the *Soldiers* from discovering before that *Angle*. Therefore *Tenailles* are only made when there is not time enough to make *Horn works*. The *Ramparts*, *Parapets*, *Fosses*, *Covert-Way*, and *Glacis* of *Tenailles*, are the same with other *Out Works*.

*Tenaille in the Foss*, is a low Work raised before the *Curtin* in the middle of the *Foss*, and is of three different sorts, as may be seen in the *Foss* of the *Cittadel*, in the *Grand Plan*. The first is composed of a *Curtin*, two *Flanks*, and two *Faces*. The *Rampart* of the *Curtin*, including the *Parapet* and *Talus*, is but five fathom thick, but the *Rampart* of the *Flanks* and *Faces* is seven. The second, which *Vauban* has by Experience found to be of a very good Defence, is composed only of two *Faces*, made on the Lines of Defence, whose *Rampart* and *Faces* are parallel. The third differs from the last, only in having its *Rampart* parallel to the *Curtin* of the Place. All these sorts are very good Defences for the *Foss*, and lye so low, that they cannot be hurt by the *Besiegers Cannon*, till it be on the *Covert-Way*.

*Tenaille of a Place*, or *Front of a Place*, is what is comprehended between the Points of two Neighbouring *Bastions*, as the *Faces*, the *Flanks*, and the *Curtin*. So it is said, The Enemy attacked the whole *Tenaille* of a Place, when they made two Attacks on the *Faces* of the two *Bastions*.

TENT,



TENT, is a sort of Pavilion of Cloth which is pitched upon Poles, with Cords and Pegs, and pulled down when the Army moves; it serves to keep an Officer under Cover, as the small Tents do the Soldiers.

TERRE-PLEIN of a Rampart, is the Horizontal Superficies of the Rampart, between the Interior Talus and the Banquett; 'tis on the Terre-plein, that the Defendants go and come; it is likewise the Passage of the Rounds. Trees on the Terre-plein of a Rampart, serve to bind it, but in a Siege they are inconvenient; for the noise made by the Wind amongst the Leaves, hinders the Besieged from hearing the Work-men in the Approaches.

To TERTIATE a Piece, is to examine it, whether it has the due thickness of Metal in every place, and whether it be true bored.

THUNDERING-BARRELS, see Barrels.

TOISE, is a Measure used by the French Engineers in all their Fortifications, and is six foot; a square Toise is 36 square feet, and a cubical Toise is 216 cubical feet.

TOMPION, is a stopple of Wood or Cork, which is used in loading a Mortar; it is exactly fitted for the mouth of the Chamber, and is drove hard in after the Powder, and the Bomb is placed above it; it serves by confining the Powder, to make it burst out

with the more Violence. Tompion is likewise a stopple of Wood for the mouth of the Mortar or Gun, to keep out the Rain.

TOUCH-HOLE or Vent, is the small Hole at the end of the Cylinder of a Gun or Musquet, by which the Fire is conveyed to the Powder in the Chamber. In a Fire-lock, Carabine, or Pistol, it is called the Touch-hole, but in a Piece of Cannon it is more properly called the Vent.

TOWN-MAJOR, see Major.

TRANSUM, is a piece of Wood which goes across betwixt the Cheeks of a Gun-Carriage, or of a Gin, to keep them fixed together; each Transum in a Carriage is strengthened by a Bolt of Iron. See Carriage.

TRAPEZE, a four sided Figure, having only two of its four Sides parallel.

TRAPEZOIDE, is a Figure of four Sides, all unequal, and whose Angles are likewise unequal, and none of its Sides parallel.

TRAVERSE, is a Trench with a little Parapet, sometimes two, one on each side; to serve as a cover from the Enemy that might come on their Flank: sometimes it is covered over head with Planks, and loaded with Earth. They are very advantageous in stopping an Enemies Way, and to prevent being enfiladed. They are likewise a good Defence in a dry Foss, in making the

the *Parapet* on the side next the opposite *Flank*.

*Traverse* in a wet *Foss*, is made by throwing into the *Foss* over against the place where the *Miner* is to be put to the Foot of the *Wall*, abundance of *Saucissons*, *Foysts*, and other pieces of Wood, with *Fascines*, *Stones*, *Earth*, and all other things which can help to fill up the *Foss*, and be capable of carrying a *Gallery* for such as use it.

*Traverse* is likewise a Wall of Earth or Stone cross a Work which is commanded, to cover the Men; as at *Coehorne's Work* at *Namure*, which lies on the side of a high Ground, and is open to the other side the *Sambre*; there are two high *Traverses* cross the Work one behind another.

To *Traverse* a Gun or Mortar, is to bring her about with *Handspikes* to the Right or Left, till she is pointed exactly at the object.

*Trench*, which is likewise called *Lines of Approach*, and *Lines of Attack*, is a way hollowed in the Earth, in form of a *Foss*, having a *Parapet* towards the place besieged, when the Earth can be removed; or else it is an Elevation of *Fascines*, *Gabions*, *Wool-packs*, and such other things that can cover the Men, and that does not fly in pieces or splinters to hurt them: This is to be done when the Ground is rocky, but when the Earth is good, the *Trench* is carried on with less trouble;

and the *Engineer* is to demand only Provision of *Spades*, *Showels*, and *Pickaxes*, to enlarge the *Trench* to five foot deep, and two fathoms wide. The greatest Fault a *Trench* can have, is to be enfiladed; to prevent which they are ordinarily carried on with Turnings and Elbows. As the *Trenches* are never carried on but in the night time, therefore the Ground ought to be viewed and observed very nicely in the day. On the *Angles* or *Sides* of the *Trench*, there ought to be *Lodgments* or *Epaulments* in form of *Traverses*, the better to hinder the *Sallies* of the *Garrison*, to favour the Advancement of the *Trenches*, and to sustain the Work-men. These *Lodgments* are small *Trenches* fronting the Place besieged, and joining the *Trench* at one end. The *Platforms* for the *Batteries* are made behind the *Trenches*, the first at a good distance, to be used only against *Sallies* of the *Garrison*; as the *Approaches* advance, the *Batteries* are brought nearer, to ruin the *Defences* of the Place, and dismount the *Artillery* of the besieged: The *Batteries* for the *Breaches*, are made when the *Trenches* are advanc'd near the *Covert-Way*. If there be two *Attacks*, there must be *Lines of Communication* or *Boyaus* between the two, with *Places of Arms*, at convenient distances. The *Trenches* ought to be six or seven foot high with the *Parapet*, which ought to be five foot thick, and have



have *Banquets* for the *Soldiers* to mount upon.

*Returns of a Trench*, are the *Elbows* and *Turnings* which form the *Lines of Approach*, and are made as near as can be parallel to the *Defences* of the *Place*, to prevent their being enfiladed.

To mount the *Trenches*, is to mount *Guard* in the *Trenches*. To relieve the *Trenches*, is to relieve the *Guards* of the *Trenches*. To dismount the *Trenches*, is to come off the *Guard* of the *Trenches*. To cleanse or scour the *Trenches*, is to make a vigorous *Sally* upon the *Guard* of the *Trenches*; to force them to give way and quit their *Ground*, to drive away the *Work-men*, break down the *Parapet*, fill up the *Trench*, and to nail their *Cannon*.

*Counter-Trenches*, are *Trenches* made against the *Besiegers*, which consequently have their *Parapet* turned against the *Enemies Approaches*, and are enfiladed from several parts of the *Place*, on purpose to render them useless to the *Enemy*, if they chance to be *Masters* of them; but they ought not to be enfiladed or commanded by any *Height* in the *Enemies Possession*.

**TRIANGLE**, is a *Figure* comprehended betwixt 3 *Sides*, and is either *Rectilinear* or *Spherical*. A *Rectilinear* or *plain Triangle*, is a *Figure* consisting of 3 *straight Sides*. A *Spherical Triangle*, is a *Figure* formed by three *Arches*, of three great *Circles*,

cutting one another on the *Surface* of a *Sphere*.

A *Rectilinear Triangle*, considered according to the *Sides*, may be either *Equilateral*, *Isoceles*, or *Scalene*; and considered according to its *Angles*, may be either *Rectangle*, *Ambligon*, or *Oxigon*.

*Triangle Equilateral*, is what has the three *Sides* equal; it is evident, the three *Angles* must likewise be equal, each being sixty *Degrees*. *Triangle Isoceles*, is what hath two *Sides* equal; whence it follows, that all *Equilateral Triangles* are *Isoceles*; tho' all *Isoceles Triangles* are not *Equilateral*. *Triangle Scalene*, is what hath three unequal *Sides*. *Triangle Rectangle*, is what hath one *Right Angle*. *Triangle Ambligon*, is what hath one *Obtuse Angle*. *Triangle Oxigon*, is whose *Angles* are all *Acute*.

**TROOP** of *Horse* or *Dragoons*, is a small *Body* of about 50 or 60; sometimes more, sometimes less; commanded by a *Captain*. Each *Troop* has, besides a *Captain*, a *Lieutenant*, *Cornet*, *Quarter-Master*, and three *Corporals* who are the lowest *Officers* in a *Troop*. A *Regiment* of *Light Horse* in *England*, consists of six *Troops*, and sometimes nine.

*Troop*; to *Beat the Troop*, is the same with *Assembly*; see *Assembly*.

**TROOPER**, is a private *Man* in a *Troop* of *Horse*.

**TRUCKS**, are small *Wheels* of one piece of *Wood*, about a

foot and a half or two foot diameter, used for *Sea Carriages*, and likewise for the *Truck-Carriages* by Land, and sometimes for *Garrison Guns*.

**TRUMPET**, is an Instrument of Wind Musick, used in publick Rejoicings, but especially in the War; each *Troop of Horse* has two *Trumpets*. It is made of Metal, most commonly of Brass, but sometimes of Silver. The Mouth of the *Trumpet* is always of Brass, and is to take out and in at Pleasure. He who blows the *Trumpet*, is called the *Trumpeter*, who ought to be a Man fit for Fatigue and Vigilant. The first Sound of the *Trumpet* before a March, is to *Boot and Saddle*, at which the *Troopers* get themselves ready to mount; this is founded when the *Drums* beat the *General*. When the Assembly is beat, then the *Trumpet* sound to *Horse*, and they all mount; the third is to *March*. The *Trumpets* likewise sound a *Charge* in day of *Battel*, and the *Retreat* at night.

**TRUNIONS** of a *Gun*, are the two pieces of Metal sticking out on the sides of a Piece, by which it swings in its *Carriage*. They are generally the diameter of the *Ball* of the Piece in length, and their diameter is the same with the diameter of the *Ball*. The *Axis* of the *Trunions*, is equal with the lowermost side of the *Chace* of the *Gun*.

**Trunion-Ring**, is that Ornament or Jutting out a little before the *Trunions*.

**TURNPIKE**, see *Chevaux de Frise*.

## V.

**VAN**, or *Van-Guard*, is that part of the *Army* which marches in the *Front*. See *Guard*.

**VEDETTE**, is a *Centry* on *Horse-back*, or a *Trooper* upon a *Centry Post*. His *Horse Head* is towards the Place from whence any Danger is feared, and his *Carabine* is advanced with the Butt End against his right Thigh; when the *Army* lies encamped, there are *Vedettes* posted at all Avenues, and on all Rising Grounds, to watch for its Security.

**VENT** or *Touch-hole*, see *Touch-hole*.

To **VIEW** a Place in order to besiege it, which the *French* call *Reconnoitre*, is when the *General* accompanied by the *Engineers* rides round the Place, observing the Situation of it, with the Nature of the Country about it; as *Hills*, *Valleys*, *Rivers*, *Marshes*, *Woods*, *Hedges*, &c. thereby to judge of the most convenient place for opening the *Trenches*, and carrying on the *Approaches*; to find out proper places for encamping the *Army*, for the *Lines of Circumvallation* and *Contrevallation*, and for the *Park of Artillery*.

To *View* or *Reconnoitre* an *Enemy*,

is to get as near their *Camp* as possible, to see the Nature of the



the Ground, and the Avenues to it, to find out the Strength and Weakness of their Encampment, where they may be best attacked, or whether it be proper to hazard bringing them to Action. *Parties of Horse*, are generally sent out to view the Enemies March, to know whether it tends, thereby to guess at their Designs, and to regulate the Motions of the *Army* accordingly.

To *View or Reconnoitre*, is likewise when the *Quarter-Master-General*, with a strong Party of *Horse*, goes to view the Ways for the March of the *Army*, and to find the most convenient place for an Encampment, to wit where there is Water and Forage, where the *Army* may not be too much exposed to the Insults of the Enemy, but covered by Rivers, Marshes, or strong Grounds, where they cannot easily be forced.

**VOLUNTEERS**, are Persons of Quality, who of their own accord, either for the Service of their *Prince*, or out of the Esteem they have for the *General*, serve in the *Army*, without being engaged to any *Captain*; but upon their own Expence are ready upon all Occasions to gain Honour and Preferment, by exposing themselves in the Service.

**UTENSILS**, are the Necessaries which are to be furnished by a *Landlord* to the *Soldiers* quarter'd upon him, such as *Beds*, *Sheets*, *Pots*, *Dishes*, *Spoons*, *Cups*, *Fire*, *Candle*, &c. Sometimes the

*Landlords* make an Agreement for these things, and allow Money in lieu of 'em.

*Utensils*, are likewise all sorts of Hand-Tools used in an *Army* or at a *Siege*, such as *Spades*, *Shovels*, *Pick-axes*, *Hatchets*, *Bills*, &c. or the Instruments used about a *Gun*, as the *Ladle*, *Rammer*, *Spunge*, *Wad book*, *Linstock*, *Coins*, *Hand-spike*, *Priming-Iron*, &c.

W.

**WADD**, is a Stopper of Hay or Straw forced into a *Gun* upon the *Powder*, to keep it close in the *Chamber*; when it is home at the *Powder*, the *Gunner* gives it generally three thumps with the *Rammer Head*.

**WAD-HOOK** or *Worm*, is a small Iron turned Serpent-wise like a Screw, and put upon the end of a long Staff, to draw out the *Wad* of a *Gun* when she is to be unloaded.

**WAGGONS**, see *Baggage-Waggons*.

*Waggon-Master-General*, is he who has the ordering and marching of the *Baggage* of the *Army*. On a day of March, he meets the *Baggage* at the Place appointed in the Orders, and marshals it according to the *Rank* of the *Brigade* or *Regiment* each *Waggon* belongs to, and marches it according to the Route given him, which is sometimes in one *Column*, sometimes in two; sometimes after the *Artillery*, and some-

Sometimes the Baggage of each *Column* follows their respective *Column*.

**WARNING-PIECE**, is the *Gun* which fires every night about Sun-set, to give Notice to the *Drums* and *Trumpets* of the *Army*, to beat and sound the *Retreat* or *Tattou*, which is likewise called setting the Watch.

**WARRANT-OFFICER**, see *Officer*.

**WELL**, is a Depth sunk in the Ground by the *Miner*, from whence he runs out Branches or Galleries in search of the *Enemies Mine* to disappoint it, or to make a *Mine*.

**WHEEL**, is a Word of Command, when a *Battalion* is to alter their *Front*, either one way or other. When a *Battalion* is to *Wheel to the Right*, every Man moves and wheels from the Left to the Right, only the Man on the *Right Angle* turns very slowly, being as it were the Hinge on which the rest move. When a *Battalion* is commanded to *Wheel to the Left*, the Soldier on the *Left Angle* turns slowly, while the Right wheels from the Right to the Left. When the Word of Command *Wheel*, is given to a Division of Men upon a March, if it be *to the Right*, the Right Hand Man keeps his Ground, turning only on the Heel, while the Left Hand Man moves about quick, till he makes an even Line with the Right Hand Man. If it be *Wheel to the Left*, the con-

trary is to be observed. To *wheel by single Ranks*, if it be *to the Right*, the Right Hand Man of each *Rank* turns on his Heel, while the Left Hand Men move round, and the whole are formed into one *Rank*, fronting as their *Flank* was before. To reduce them into *Ranks* again, the Left Hand Men turn on their Heels, while the Right Hand Men move round. The Motion of wheeling is of great use, if a *Battalion* be threaten'd with an Attack upon its *Flank*, or if there be a Design of falling upon the *Enemies Flanks*. *Squadrons* of *Horse* wheel after the same manner.

**WHEEL-BARROW**, is one of the most necessary Utensils about a *Fortification*, for rolling the Earth from one place to another; it is so well known, it needs no Description. See the Figure at *Doffer*.

**WHEELS** of a *Gun Carriage*, which serve for marching the *Gun* with more ease, are two large Circles of Wood composed of the *Fellows*, the *Spoaks*, and the *Nave*. The *Fellows* are six pieces of Wood, their thickness being that of the diameter of the *Ball*, their breadth something more, forming each an Arch of sixty Degrees, so that being joined, they make one entire Circle; they are joined where their ends meet by a peg of Wood, called the *Duledge*, and the Joint is strengthened on the outside of the



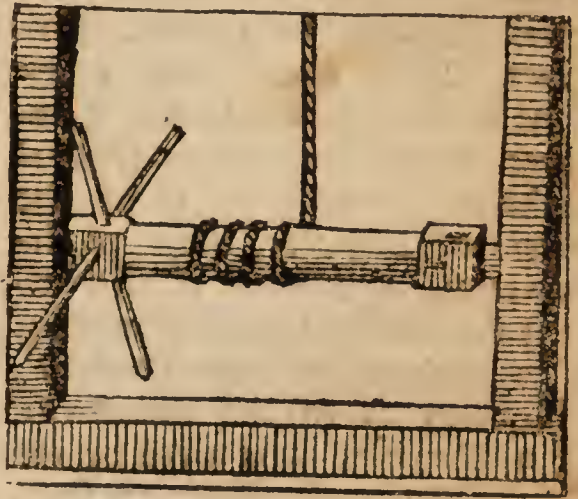
Wheel by a strong plate of Iron, called the *Dudge-Plate*, and on the Circumference, by a plate of Iron of the length and breadth of one of the *Fellows*, called the *Straiks*, fixed on it with strong Nails, called the *Straike-Nails*; the *Straiks* cover the Joints of the *Fellows*. The *Spoaks* are twelve in number, being short pieces of Wood let into the inner Circumference of the *Fellows*, and into the *Nave*, and appear like so many Semi-diameters or Rayons; they keep the *Nave* in the Centre, and ease the *Fellows*. The *Nave* is a short thick piece in the Centre of the *Wheel*, through which the *Axletree* goes, and is fixed on the other side by a *Linspin*. The length and diameter of the *Nave*, is proportioned to the nature of the *Gun*. It is bound with two strong Hoops of Iron, called the *Nave-Bands*. The two *Wheels* are one on each end of an *Axletree*, which keeps them at a fix'd distance, and upon which the fore part of the *Carriage* is fixed by strong Bands of Iron, called the *Axletree-Bands*.

**WICKET**, is a small Door in a Gate of a fortified Place, at which a Man on Foot may get in, which is sometimes opened when the Gate is ordered to be kept shut. The height of it is about three foot and a half, and the breadth two.

**WINDAGE** of a *Gun*, is the difference between the diameter of the *Bore*, and the diameter of the *Ball*; for since the *Ball* are

rough, if they were not somewhat less than the *Bore*, they might jamme in the Piece; so the *Windage* of a *Demi Culverin* is a quarter of an inch.

**WINDLACE**, is a Roller



of Wood square at each end, through which is either cross Holes for Hand-spikes, or Staves across, to turn it round; by this means it draws a Cord, one end of which is fastened to some weight which it raises up. They are used in *Gins*, and about *Dutch Mortars* to help to elevate them.

**WINGS** of an *Army*, see *Army*.

*Wings* of a *Battalion*, are the Right and Left Hand *Files*; when a *Battalion* is drawn up, the Divisions on the Right and Left are called the *Wings*.

**WINTER-QUARTERS**, are ordinarily the Place where *Troops* are lodged during the *Winter*. It is likewise the time comprehended betwixt the end of the Campaign, and the beginning of the next.

WISCHER, see *Nave*.

VVITNESSES, see *Testims*.

VVORD in an *Army* or *Garrison*, is a Token or Mark of Distinction, by which Spies or Treacherous Persons are known; it serves likewise to prevent Surprizes. It is given out every night by the *General* to the *Lieutenant-General*, or *Major-General* of the Day, who gives it to the *Majors* of *Brigades*, they to the *Adjutants*, who give it first to their *Field-Officers*, and afterward to a *Serjeant* of each *Company*, who carry it to the *Subalterns*. In a *Garrison*, it is given by the *Governour* after the *Gates* are shut, to the *Town-Major*, who gives it to the *Adjutants*, and they to the *Serjeants*.

*Words of Command*, are the Terms used by *Officers* in exer-

cising *Batallions* or *Squadrons*, or when they are upon *Action*.

VVORKS; all the *Fortifications* about a *Place*, are called the *Works of the Place*; and more particularly all detach'd *VVorks*, are called the *Out-Works*.

VVORM, is a *Screw* of *Iron* to be fixed on the end of a *Rammer*, to pull out the *VVad* of a *Firelock*, *Carabine* or *Pistol*; it is the same with *Wad-hook*, only the one is properer for small *Fire-Arms*, and the other for *Cannens*.

Y.

YOUNGER *Officer*; is he whose *Commission* is of a later *Date*.

*Younger Regiment*, is that which is of a shorter standing, in respect of another.

THE



# There will be shortly Publish'd,

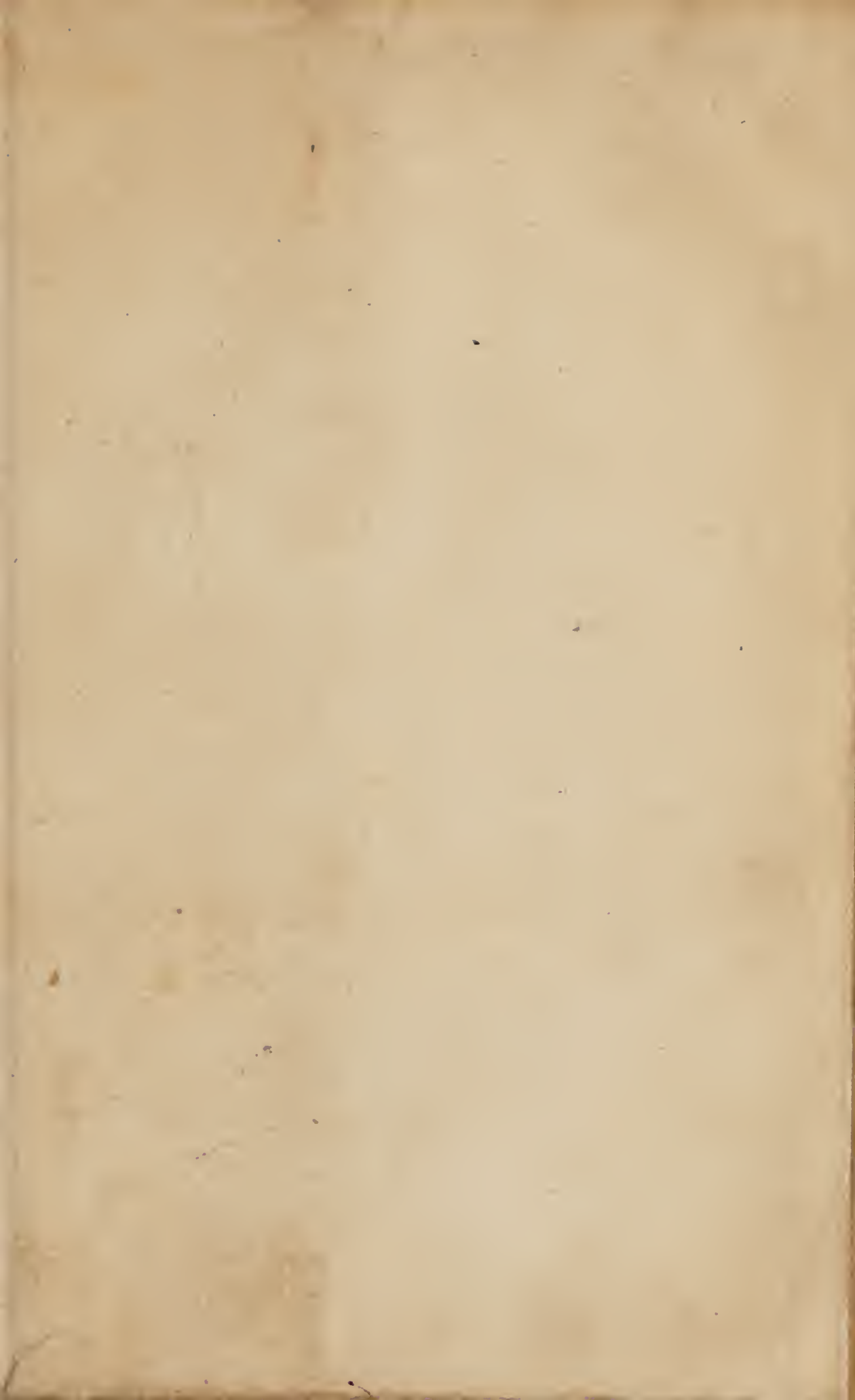
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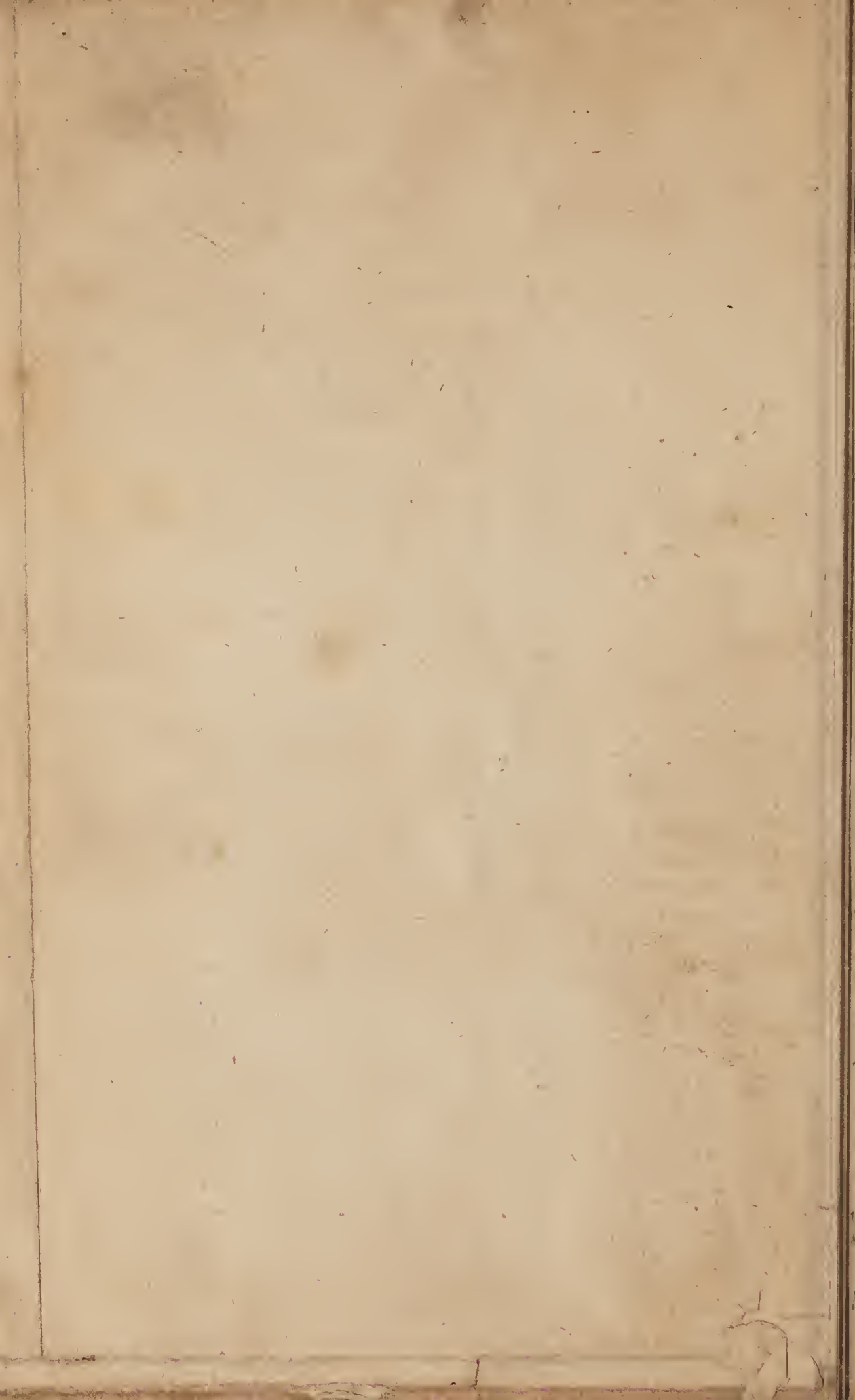
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T H E

# Gentleman's Dictionary.

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P A R T III.

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CONTAINING

The Art of NAVIGATION: With the *Explanation* of all the Terms relating to *Naval-Affairs*; as in the *Building, Rigging, Working, and Fighting* of SHIPS: Of Officers, and their *Duty*, &c.

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The Art of Navigation Teaches how to Conduct or Guide a Ship from one Place to another, by the help of Sea-Charts, Magnetic-Compass, Sounding-Line, Log-Line, and Due Observations of the Height of the Sun and Stars; As also, a thorow-Knowledge in the Working of a Ship, upon all Occasions whatsoever: And therefore the Art of Navigation has Two Parts, (viz.) The Piloting, and the Working-part of Navigation.

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The Names of each Part, and Material belonging to a Ship compleatly Rigg'd, are here rank'd in an Alphabetical Order, and fully Described, with their several Uses; as also the principal Sea-Terms, and Phrases in the Working of a Ship, in all Circumstances, amply Explain'd; with variety of Instances, shewing when properly to apply such Expressions: And all the Terms of Art, as well in the *Piloting*, as in the *Working-part* of Navigation, are here largely insisted on.

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A B A

A D M

**A**BAFT, or *Aft*, is that part of the Ship towards the *Stern*, or the Hind-part of the Ship.

*The Mast hangs Aft; that is, The Mast hangs towards the Stern.*

*How Chear ye Fore and Aft? that*

is, How fares all your Ship's Company?

ABASE, signifies to Lower or Take in; as, *to Abase the Flag*, is, to Take in the *Flag*.

ADMIRAL, is the Chief of a Fleet, or He that has the Com-

A a a

mand

mand of a whole Fleet, or is Intrusted with the Naval Affairs of a Kingdom. See *Flags*, and *Officers*.

**AFTWARD**, the Hinder-part of the Ship.

**ALOOF**, or, *Keep your Loof*, is a word of Command from him that Cons the Ship, to the Man at Helm, when the Ship Sails upon a Wind, or on a Quarter-Wind, directing him to keep the Ship near the Wind. See *Cond*.

**ALTITUDE** of the Sun, or Star. See *Height*.

*Meridian Altitude*. See *Meridian*.

**AMAIN**, is a word sometimes used by a Ship to his Enemy, by way of Defiance, or Commanding him to Strike his *Top-Sails*, that is, to Yield.

*Strike Amain*; that is, Lower your *Top-Sails*.

**AMPLITUDE** of the Sun, is an Arc of the *Horizon*, intercepted between the *Prime Vertical* and the Sun, in his *Rising* or *Setting*.

*Magnetical Amplitude*, is an Arc of the *Horizon*, intercepted between the Sun in his *Rising* or *Setting*, and the *East* or *West* Point of the *Compass*.

**ANCHOR**, is an Instrument to stop Ships on the Sea or River: It consists of a *Shank* or *Beam*, with *Flocks* at one end, which fasten to the Ground, their length being one third of the *Shank*; and at the other end is fasten'd the *Stock*, serving to guide the *Flock*, that it may fix in the Ground; as also a *Ring*, to which the *Cable* is fasten'd. There are several sorts of *Anchors*,

differing only in Weight, which is according to the Burden of the Ship.

*Sheet-Anchor*, is the greatest of all that belong to a Ship, and is never used but in great Necessity, as being their utmost Refuge, when forced to Ride on a *Lee-shore*.

*Bow-Anchors*, or *First* and *Second Bower*, or *Best* and *Small Bower*, are such as the Ship, in Fair Weather, may Ride by.

*Kedge-Anchor*, or *Kedger*, used in Calm Weather, in a low Stream; or to *Kedge* up and down a narrow River, lest the Wind or Tide should drive the Ship ashore.

*Grapples*, or *Grapplings*, are the smallest of all the *Anchors*; they have four *Flocks*, but no *Stock*: Their Use is, for a Boat to ride by, or to throw into an Enemy's Ship in a Close Engagement; to catch hold of the *Gratings*, *Rails*, &c. in order for *Boarding* her.

*To Ride at Anchor*, is said of a Ship which is held so fast by her *Anchors*, as not to be driven with either Wind or Tide. The best *Riding at Anchor*, is when the Ship is *Land-lock'd*, and out of the Tide.

*To Cast*, or *Drop Anchor*, is to let it fall, to stop the Course of the Ship.

*To Weigh Anchor*, is to get it up, in order to Set Sail.

*To Shore an Anchor*, is to put Boards fitted for that purpose on the *Flocks*, that the *Anchor* may the better hold in Soft Ground.

*The Anchor is Foul*; that is, the *Cable* is hitch'd about the *Flock*,  
by



by the turning about of the Ship.

*The Anchor is come Home*, is, when it cannot hold the Ship, but that she drives away by the violence of the Wind or Tide.

*The Anchor is a Pesk*; that is, the *Anchor* is right under the *Hawze* (or *Hole*) through which the *Cable* belonging to that *Anchor* runs out.

*The Anchor is a Cock-bell*; that is, the *Anchor* hangs up and down by the Side of the Ship.

*Pudding of the Anchor*. See *Pudding*.

ANCHORAGE, or *Anchoring*, a Ground fit to hold a Ship's *Anchor*, that she may ride it out safely. The best *Anchoring* Ground is stiff Clays, or hard Sand.

ARMED: A *Cross-Bar-Shot* is said to be *Armed*, when some Rope-yarn, or the like, is rolled round about the End of the Iron-Bar which runneth through the Shot. This is done, that the Shot may be the better Rammed into the Gun; as also, lest its Ends should catch into the *Honey-combs* in the Piece.

ARMINGS, or *Waste-Cloths*, are a sort of Red Cloths hung about the Out-sides of the Ship's Upper Works, *fore* and *aft*, and before the *Cubbridge-heads*: Its Use is for Show, and to Grace the Ship; as also, to cover the Men, in time of an Engagement, from being seen by the Enemy.

*Top-Armings*, those about the *Round-Tops*, for the same Purpose.

ARM-MAST. See *Mast*.

AVAST, signifies to Stay, Hold, or Stop.

AWNING, is a Sail, or the like, hung over any part of the Ship above the Decks, to keep off the Sun's scorching Heat, in Hot Climates; and sometimes, as a defence from Rain, or Wind. In a Boat, an *Awning* is made, by bringing the *Sail* over the *Yard* and *Stay*, and booming it out with the *Boat-hook*.

AZIMUTH of the Sun, is an Arc of the *Horizon*, intercepted between the *Meridian*, and the *Vertical Circle* which passeth the Centre of the Sun.

*Magnetical Azimuth*, is an Arc of the *Horizon*, intercepted between the *Magnetical Meridian* and the Sun's *Azimuth Circle*: 'Tis found by an *Azimuth Compass*, by observing the Sun, when he is about 10 or 15 Degrees above the *Horizon*.

AZIMUTH-COMPASS. See *Compass*.

## B

BACK-STAFF, is an Instrument of excellent Use in taking the Sun's Altitude at Sea. Invented by one Captain Davis a Welshman, and is call'd, by some, *Davis's Quadrant*, or the *Sea-Quadrant*; but by the French, 'tis call'd, the *English Quadrant*.

BACK-STAYS. See *Stays*.

**BAIL**, or to *Baile*, is, to throw the Water, by Hand, out of the Boat.

**BAILS**, are the Hoops that bear up the Title of a *Boat*.

**BALLAST** of a *Ship*, is either Gravel, Stones, &c. stow'd in the Hold, to keep her stiff in the Sea, that she may bear the more Sail.

*Trench the Ballast*; that is, (in seeking a Leak) to part the *Ballast*.

*The Ballast Shoots*; that is, it runs over from one side to the other.

**BARE-PUMP**. See *Pump*.

**BARGES**, are Boats of State and Pleasure, which *Men of War* have to carry Generals, Admirals, and Chief-Commanders; they are generally finely built, and adorn'd with various Ornaments, having Bales and Tilts, and Seats furnish'd with Cushions and Carpets, &c. and Benches for many Oars: These are also used in Navigable Rivers that lead to Rich Cities. Also, those great Flat-bottom'd Vessels, employ'd in Navigable Rivers, for carrying of Goods, &c. are call'd *Barges*.

**BARQUE**, or *Bark*, is a Vessel with Three Masts, (*viz.*) Main-Mast, Fore-Mast, and Misson-Mast: They carry about 200 Tuns.

**BARQUE-Longue**, is a small, low, and sharp-built, but very long Vessel, without a Deck; they go with Sails and Oars, and are common in *Spain*.

**BARRS**, *Capstan-Barrs*. See *Capstan*.

**BEAK**, or *Beak-Head* of a *Ship*, is that Part without the Ship, before the *Fore-Castle*, which is fasten'd to the *Stem*, supported by the *Main-Knee*: 'Tis commonly Carv'd and Painted, and is a great Ornament to the Ship, besides other necessary Uses.

**BEAKONS**, or *Beacons*, are Fires kept on the Sea-Coasts, to prevent Shipwracks, and to give Notice of Invasions, &c.

**BEAMS** of a *Ship*, are the great Main Cross-Timbers which keep the Sides of the Ship asunder, and which support the *Decks* and *Orlops*: They are reckon'd by *First*, *Second*, and *Third Beam*, from the

*Main-Beam*, or that which is next the *Main-Mast*.

*Midship-Beam*, is the Greatest *Beam* of all.

**BEAR**, is a word used in these several senses:

*Bear up*; that is, Let the Ship sail more before the Wind.

*Bear up round*; that is, Put her right before the Wind.

*Bear in with the Land*, or *Harbour*; that is, when she sails towards the Shore, with the Wind Large, or before the Wind.

*The Ship Bears off*; that is said of a Ship that keeps off from the Land.

*The Ship Bears a good Sail*; that is, (having all her Sails abroad, in a Gale of Wind) sails upright in the Water.



*To bring the Guns to Bear* ; that is, to lie right with the Mark.

**BEARING**, the Point of the *Compass*, that one Place *Bears* from another.

**BE CALM'D**, is said of a Ship that has not a Breath of Wind : And 'tis usual to say, *Our Ships lay so close together, that we Becalm'd one another* ; that is, The Wind had no Power over us. See *Rain*.

**BED** of the Carriage of a Gun, is the Plank which lies under the Piece.

*To BELAY*, is to make fast the Ropes in their proper Places.

**BENDS**, *Wails*, or *Wales*, the Outmost Timbers of a Ship's-side, on which Men set their Feet, in climbing up : They are reckon'd from the Water, and are call'd the *First*, *Second*, or *Third Bend*, or *Wail* : They are the chief strength of the Ship's-Sides, and have the *Beams*, *Knees* and *Foot-hooks* bolted to them.

*To Bend the Cable* ; that is, to make it fast to the Ring of the Anchor.

*To Unbend the Cable* ; that is, to loosen it from the Ring of the Anchor, as it is often done, when the Ship is long at Sea.

*To Bend the Main-Sail*, is to make it fast to the Yard.

**BENDING**, is Tying two Ropes, or Cables, together.

**BENEAP'D**: *A Ship is Beneap'd*, that is, when the Water does not flow high enough

to bring the Ship off the Ground, out of the Dock, or over the Barr.

**BIGHT** ; any part of a Rope between the Ends.

*Holding by the Bight*, is to hold by that part of the Rope which is *Quoyl'd*, or Roll'd up.

**BILBOWS**, a Sea-Punishment, answering to *Stocks* at Land. See *Duckings*.

**BILGE** of a Ship, is the bottom of her Floor, or the breadth of the Place the Ship rests on, when she is a ground : Therefore,

*Bilge-water*, is that which lies on her Floor, and cannot go to the Well of the Pump.

*Bilge Pumps*, or *Burr-Pumps*, are those which carry off the *Bilge-Water*.

*The Ship is Bilged* ; that is, she has some of her Timber struck off, on a Rock or Anchor, and Springs a Leak.

**BILLOWS**, or *Surges* of the Sea ; that is, the Waves raised by the Wind.

**BIRTH**, is a convenient Place to *Moor* a Ship in ; as also a due Distance observed between Ships lying at Anchor, or under Sail. And a proper Place aboard for a *Mess* to put their Chests, &c. is call'd the *Birth* of that *Mess*.

**BITTACLE**, is a Square Box standing before him that Steers the Ship, with the *Compass* placed therein, to keep, and direct the Ship in her Course.

**BITTER**, is a Turn of the Cable about the *Bits*.

*She is brought up to a Bitter*, is said of a Ship that is to stop by a *Cable*.

**BITTER's-End**, is that part of the Cable which stays within Board.

**BITS**, in a Ship, are two great Pieces of Timber (usually placed abaft the Manger in the Ship's Loof) thorow which the *Cross-piece* goes; their lower parts are fasten'd to the *Riders*, and their middle parts (in great Ships) are bolted to two great Beams cross the *Bows*: Their Use is to Belay the Cable thereto, when the Ship rides at Anchor. In great Storms, to strengthen the *Bits*, and secure the *Bows* the Cable is fasten'd to the *Main-Mast*.

*Fore-jeer-Bits*, to which the *Fore-jeer* is fasten'd and Belay'd.

*Fore-top-sail-sheet-Bits*, to which the *Fore-top-sail-sheet* is belay'd.

**BLOCKS**, (at Sea, is the usual Name for what we call *Pulleys* at Land,) are thick Pieces of Wood, some with three, four or five Shivers in them, thorow which all the *running Ropes* runs.

*Blocks*, whether *Single* or *Double*, are distinguish'd and call'd by the Names of the Ropes they carry, and the Uses they serve for.

*Double Blocks*, are used when there is occasion for much strength; because they'll Purchase with more ease than *single Blocks*, tho' much slower.

*Block and Block*, a Phrase signifying, that two *Blocks* meet, in

Haling any *Tackle*, or *Halliard*, having such *Blocks* belonging to them.

*Fish-Block*, is hung in a Notch at the End of the *David*; it serves to hale up the *Flocks* of the *Anchor* to the Ship's *Bow*.

*Snatch-Block*, is a great *Block* with a *Shiver* in it, and a *Notch* cut through one of its *Cheeks*, for the more ready receiving in of any *Rope*; since by this *Notch* the middle part of a *Rope* may be reev'd into the *Block*, without passing it end-wise. 'Tis commonly fasten'd with a *Strap* about the *Main-Mast*, close to the *Upper-Deck*; and is chiefly used for the *Fall* of the *Winding-Tackle*, which is reev'd into this *Block*, and then brought to the *Capstan*.

**BLUFF**, or *Bluff-headed*, is said of a Ship with an upright *Stern*.

**BOARD**, is a word variously used at Sea: As,

*To go Aboard*, signifies to go into the Ship.

*To heave Over-board*, is to throw a thing out the Ship, into the *Sea*.

*To slip by the Board*, is to slip down by the Ship's side.

*Board and Board*, is when two Ships come so near as to touch one another, or when they lie side by side.

*To make a Board*, is to turn to *Windward*: And the longer your *Boards* are, the more you work into the *Wind*.

*To Board it up*, is to beat it up, some-



sometimes upon one Tack, and sometimes upon another, or bolt it to and again, in sailing against the Wind.

*She makes a good Board*; that is, the Ship advances much at one Tack.

*The Weather-Board*, is that side of the Ship which is to Windward.

*To Board a Ship*, is to Enter an Enemy's Ship in a Fight. In *Boarding a Ship*, 'tis best to Bear directly up with him, and to cause all your Ports to Leeward to be beat open, and bring as many Guns from your Weather-side thither, as you have Ports for, and then Lay the Enemy's Ship on Board, Loof for Loof; and order your Tops and Yards to be Mann'd, and furnish'd with Necessaries; & let all your Small-shot be in a readiness; then Charge at once with both Small and Great, and at the same time Enter your Men in the Smoak, either on the Bow of your Enemies Ship, or bring your Midship close up with her Quarter, and so enter your Men by the Shrouds. Or if you would use your Ordnance, 'tis best to Board your Enemy's Ship *a-thwart her Hawse*; for then you may use most of your Great-Guns, and she only them of the Prow. Let some of your Men endeavour to cut down the Enemy's Yards, and Tackle, whilst others clear the Decks, and beat the Enemy from aloft: Then let the Scuttles, and Hatches be

broke open with all possible speed, to avoid Trains, and the Danger of being Blown-up, by Barrels of Powder placed under the Decks. Thus your Men being in Possession of the Sails and Helm, and the Enemy every way stow'd below the Decks, the Ship is taken, and all lies at your Discretion.

LOG BOARD. See *Log*.

BOATS, of which there are several sorts belonging to a Ship; whose Uses you have under their Names.

*Long-Boat*, is the largest and strongest Boat belonging to a Ship, that can be hois'd aboard of her: It hath a Mast, Sail, and Oars, as other Boats, as also a Tiller to the Rudder, which answers to the Helm of a Ship: Its Use is, to Weigh the Anchor, bring Goods, Provision, &c. to, or from the Ship; and other Services, as Occasion requires.

*To Trim the Boat*, is to keep her Even.

*To Wind the Boat*; is, to bring her Head the other way.

BOAT-HOOK. See *Hook*.

BOATROPE. See *Rope*.

BOATSWAIN, is a Ship-Officer, to whom is committed the Charge of all the Tackling, Sails, and Rigging, Ropes, Cables, Anchors, Flags, Pendants, &c. He also calls out the several Gangs and Companies aboard, to the due Execution of their Watches, Works, and Spells, &c.

BOATSWAIN'S-MATE, has the peculiar Command of the

Long-Boat, for the setting forth of Anchors, Weighing or fetching Home an Anchor, Warping, Towing, or Mooring; and to give an Account of his Store.

**BOLD-BOW.** See *Bow*.

**BOLD-HAWSE.** See *Hawse*.

**BOLTS**, in a Ship, are Iron-Pins, of which there are several sorts, according to their different Make, and Uses.

*Drive-Bolts*, are long Pieces of Iron, serving to drive out other Bolts, Tree-nails, or any such thing.

*Rag-Bolts*, are such as have Tags or Barbs on each side, to keep them flying out of the Hole, wherein they are driven.

*Clench-Bolts*, are those that are Clench'd with a Rivetting-Hammer, at the end where they come through.

*Forelock-Bolts*, are those, which have at the end a Forelock of Iron driven in, to keep it from starting back.

*Set-Bolts*, are those used for forcing of the Planks, and the other Works, and bringing them close together.

*Fend*, or *Fender-Bolts*, are made with long and thick heads, and struck into the uttermost Bends or Wales of the Ship, to save her Sides from Bruises, Gallings, and Hurts.

*Ring-Bolts*, are those used for bringing to of the Planks, and those Parts whereto are fasten'd the Breeches and Tackles of the Ordnance.

**BOLT-ROPE.** See *Rope*.

**BOLTSPRIT.** See *Bow-Sprit*.

**BONAVENTURE.** *Misfen.* See *Mists*.

**BONNETS**, are small Sails to put to the Main or Fore-Course, when they are too-narrow or shallow to cloath the Mast.

*Lace on the Bonnet*; that is, fasten it to the Course.

*Shake off the Bonnet*; that is, Take it off the Course.

**BOOM**, is a long Piece of Timber, with which the Clew of the Studding-Sail is spread out; and sometimes the *Boom* is used to spread or Boom out the Clew of the Main-Mast. Also, a Cable stretch'd a-thwart the Mouth of a River or Harbour, with Yards, Top-masts, Battling or Spars of Wood, &c. lash'd to it, to prevent an Enemy's entring in, is call'd a *Boom*: And such Monsieur *Chateau-Renault* had with Diligence and Art prepared at *Vigo* in *Gallicia*, for the Defence of the Plate-Fleet lying there: But how strong soever, 'twas Forc'd by Sir *Thomas Hobson*, who, by that means, made way for the rest of the *English* Ships to come in, to partake of the Taking, or Destroying all that Fleet, in 1702.

*A Ship com's Booming*; that is, she makes all the Sail she can.

**BORES-Tackles.** See *Tackles*.

**BOW** of a Ship, is that Part of her, which begins at the Loof and



and compassing Ends of the Stem, and ends at the Sternmost-part of the Fore-castle.

*Bold-Bow*, that is, a Broad *Bow*.

*Lean-Bow*, that is, a narrow thin *Bow*.

*Bow-Pieces*, are the Pieces of Ordnance at the *Bow*.

**B O W E R**, *Small*, or *Best*. See *Anchor*.

**B O W-L I N E**, is a Rope made fast to the Leech or Middle-part of the out-side of the Sail; 'tis fastened by two, three, or four Ropes, like a Crow's-Foot, to as many parts of the Sail; only the Misen-Bow-line is fastened to the lower-end of the Yard: This Rope belongs to all Sails except the Sprit-Sail, and Sprit-Top-sail; therefore those Sails cannot be used close by a Wind, for want of room to hale the Bow-Line forward by; since the Use of the Bow-Line, is to make the Sails stand sharp, or close, or by a Wind.

*Sharp the Bow-Line*; that is, *Hale it taught*; or, Pull it hard.

*Hale up the Bow-Line*; that is, Pull it harder forward on.

*Check*, or *Eise*, or *Run up the Bow-Line*; that is, Let it be more Slack.

**B O W-L I N E-B R I D L E S**, are the Ropes by which the Bow-Line is fastened to the Leech of the Sail.

**B O W-L I N E-K N O T**, is a Knot that will not slip, by which the Bow-Line-Bridles is fastened to the Crengles.

**B O W S E**, signifies as much as to Hale, or Pull.

*Bowsing upon the Tack*; that is, Haling upon a Tack.

*Bowse away!* that is, Pull away all together!

**B O W-S P R I T**, or *Bolt-Sprit*, is a kind of Mast resting slope-wise on the head of the Main-Stem, and having its lower-end fasten'd to the Partners of the Fore-mast, and farther supported by the Fore-stay: It carries the Sprit-sail, Sprit-top-sail, and Jack-staff: And its Length is usually the same with the Fore-mast.

**B O W-S P R I T-L A D D E R**. *Ladder*.

**B R A C E S**, are Ropes belonging to all the Yards of a Ship, except the Misen, two to each Yard, reev'd thorow Blocks that are fasten'd to Pennants seiz'd to the Yard-arms: Their Use is either to Square, or to Traverse the Yards: And all these *Braces* come aftward on, as the Main-Brace comes to the Poop; the Main-top-sail Brace comes to the Misen-top, and and thence to the Main-throwds: The Fore and Fore-top-sail-Braces come down by the Main and Main-top-sail-stays, and so of the rest. But the Misen bow-line serves to *Brace* to the Yard; and the Cross-jack-Braces are brought forwards to the Main-throwds, when a Ship sails close by a Wind.

**B R A C K E T S**, are small Knees serving to support the Galleries;

Galleries; and are commonly Carved: Also, the Timbers that support the Gratings in the Head, are call'd *Brackets*.

**BRAILES**, are small Ropes made use of to Furl the Sails a-cross; they belong only to the two Courses, and the Mizen-sail: They are reev'd through Blocks seiz'd on each side the Ties, and comes down before the Sail, being at the very skirt thereof fasten'd to the Crengles.

*Hale up the Brails, or, Brail up the Sail*; that is, Hale up the Sail, in order to be Furl'd, or bound close to the Yard.

**BRAKE**, is the Handle of a Pump.

**BREAD-ROOM**. See *Room*.

**BREAMING of a Ship**. See *Brooming*.

**BREAST-CASKETS**. See *Caskets*.

**BREAST-FAST**, is a Rope fasten'd to some part of a Ship forward on, to keep her Head fast to a Wharf, or the like.

**BREAST-HOOKS**, are the Compassing Timbers before, in a Ship, which help to strengthen her Stem, and all her Forepart.

**BREAST-ROPE**. See *Rope*.

**BRECHINGS**, are those Ropes with which the Great-Guns are lash'd, or fasten'd to the Ship's-side.

**BREEZE**, a shifting Wind that blows from Sea, or Land, for some certain Hours of the Day, or Night; common in *Africa*,

and some Parts of the *East*, and *West-Indies*.

**BRIGANTINE**, is a small light Vessel, which can both Row and Sail well, and is either for Fighting, or giving Chase.

**BROOMING of a Ship**, is to wash and burn off, all the Filth that she has contracted on her Sides, with Weeds, Straw, Broom, or the like, when she is on the Caren, or on the Ground.

**BUCKET-ROPE**. See *Rope*.

**BULK of a Ship**, is her whole Content in the Hold, for the Stowage of Goods.

*To Break the Bulk*; that is, to open the Hold, and take out Goods thence.

**BULK-HEADS**, are Partitions made a-thwart the Ship with Boards, whereby one part is divided from the other, as the Great-Cabbin, Gun-Room, Bread-Room, and several other Divisions. The *Bulk-Head* afore, is the Partition between the Fore-castle and Gratings in the Head.

**BUNT of a Sail**, is the Middle-part thereof, which is designedly form'd into a Bag or Cavity, that the Sail may receive the more Wind. It is used mostly in Top-sails; because Courses are generally cut square, or with but small allowance for *Bunt* or Compass.

*The Bunt holds much Leeward Wind*; that is, The Bunt hangs too much to Leeward.



**BUNT-LINES**, are small Lines made fast to the bottom of the Sails, in the middle-part of the Bolt-rope to a Crengle, and so are reev'd through a small Block seiz'd to the Yard: Their Use is, to trice or draw up the Bunt of the Sail, for the better furling of it up.

**BUOY**, is a short piece of Wood, or close-hoop'd Barrel, fasten'd so as to float directly over the Anchor; and by that means, 'tis always known where about it lies.

*Stream the Buoy*; that is, Let the Anchor fall, while the Ship has way.

*To Buoy up a Cable*, is to fasten some Pieces of Wood, Barrels, &c. to the Cable, near the Anchor; that the Cable may not touch the Ground, in case it be foul or Rocky, lest it should be fretted, and cut off.

**BUOYANT**, signifies any thing that is floating, or floatable.

**CAN-BUOYS**, are of a larger size; and used to discover dangerous Rocks and Shelves, by being fasten'd over them.

**BUOY-ROPE**. See *Rope*.

**BURTON**, is a small Tackle, consisting of two single Blocks, and may be made fast any where, at pleasure, for hoisting of small things in or out; and will Purchase more than a single Tackle with two Blocks.

**BUT-ENDS**, are the Fore-ends of all Planks under water, as they rise, and are join'd one End to another; which, in great

Ships are most carefully bolted; for if any one of these Ends should spring, or give way, the Leak would be very dangerous, and difficult to stop.

**BUTTOCK** of a Ship, is that part of her, which is her Breadth right a-stern, from the Tack upwards: And a Ship is said to have a Broad or Narrow *Buttock*, according as she is built Broad or Narrow at the Transom.

## C

**CABINS**, are the little Rooms, or Appartments, wherein the Officers lie, such as are on the Quarter-deck, and on each side of the Steerage, &c.

*Great-Cabin*, is the chief of all, and that which properly belongs to the Captain, or Chief-Commander.

**CABLE** of a Ship, is a great Rope fasten'd to the Anchors, and proportional to them; serving to keep the Ship fast, whilst she rides at Anchor.

*Sheet-Anchor-Cable*, is the greatest of all, belonging to a Ship.

*Serve*, or *Plat the Cable*; that is, Bind it about with Ropes, Clouts, &c. to keep it from galling in the Hawse.

*To Splice a Cable*, is to make two Pieces fast together, by working the several Threads of the Rope, the one into the other.

*Pay more Cable*; that is, Let it more out from the Ship, that the Boat which carries the Anchor may the more easily drop it into the Sea.

*Pay cheap the Cable*; that is, Put, or, Hand it out a-piece.

*Veer more Cable*; that is, Let more of it run out.

*The Cable is well-Laid*; that is, well-Wrought, or well-Made.

*A Shot of Cable*; when the Cable is double in length, to make the Ship ride with more ease.

*To Quoil a Cable*, is to roll it up in a Ring, or sack one above another.

*Cable-Tire*, is where these several Rolls of Cables are quoil'd.

*To Bend, or Unbend the Cable*. See *Bend*.

*Pointing the Cable*. See *Pointing*.

**CABURNS**, are small Lines made of spun Yarn, to bind Cables, seize Tackles, or the like.

**CALKING**, the same with *Caulking*; which see.

**CALM**, is when there is no Wind stirring. See *Rains*.

*Calm Sea*; that is, when the Sea appears very smooth.

**CAMBER'D-Deck**. See *Deck*.

**CAN**, a *Pump's-Can*, is a great *Can* wherewith Seamen pour Water into Pumps, to make them Pump.

**CAN-BUOYS**. See *Buoys*.

**CAN-HOOK**. See *Hook*.

**CANOW**, is a little Boat, chiefly for the Service of great Ships: The *Indians* make these *Canows* of the Trunk of a great Tree, hollow'd or scoop'd; or of the Barks of Trees sew'd together.

**CANTING-COINS**. See *Coins*.

**CAP**, in a *Ship*, is a square Piece of Timber put over the Head, or upper-end of any Mast, having a round Hole to receive the Mast. By means of these *Caps*, the Top-masts, and Top-gallant-masts are kept steady, and firm, in the *Tressel-trees*, where their Feet stand; as those of the lower Masts do, in the *Steps*; lest they should be *Born by the board*, in a stiff Gale: So that every Mast that has a Top, has a *Cap*.

**CAP of a Gun**, is a Piece of Lead, which is put over the Touch hole of a Gun, to keep the Priming from being wasted, or spilt.

*To CAP*, is said of a Ship, in the Trials of the Running or Setting of Currents.

**CAPE**, is a High Land running out with a Point into the Sea; as *Cape St. Vincent*, *Cape de Verde*, *Cape of Good-Hope*, *Cape-Horn*, &c.

**CAPSTAN**, *Main-Capstan*, is a great Piece of Timber in the nature of a Windlass, placed next behind the Main-mast; its foot standing in a step on the Lower-deck, and its head between



tween the two Upper-decks; form'd into several squares, with holes in them: It's Use is, to weigh the Anchors, to hoise up, or strike down Top-masts, to heave any weighty thing, or to strain any Rope that requireth a main force.

*Jear-Capstan*, is placed between the Main-mast and the Fore-mast; and serves to strain any Rope, heave upon the Jear-rope, or upon the Viol, or hold-off by, at the weighing of an Anchor.

*Capstan-Bars*, are the Bars or Pieces of wood, that are put into the Capstan-holes; to heave up any thing of weight into the Ship, by the help of as many Men, as can well stand at them.

*Man the Capstan!* that is, Have all the Hands necessary to heave at the Capstan-Bars.

*Spindle of the Capstan*, is the main Body thereof.

*Whelps of a Capstan*, are short Pieces of Wood made fast to it, to keep the Cable from coming too nigh, in turning it about.

*Pawl of a Capstan*, is a short piece of Iron made fast to the Deck, and resting upon the Whelps, to keep the Capstan from recoiling, which is of dangerous consequence.

*Pawling the Capstan*; that is, stopping it from turning, by means of the Pawl.

*Come up Capstan!* or, *Launch out the Capstan!* that is, Slack

the Cable which you heave by.

*CAPTAIN of a Ship*, is he that Commands a Ship of War in Chief, in a Fight; And is a Charge, as great, as that of a Colonel at Land: Besides his being Accountable for the Ship, if by his Mis-conduct Lost, or Taken. See *Officers*.

*CARDINAL-Winds*, or *Points*, are the North, West, South, and East Points of the Compass.

*CAREEN a Ship*, is to bring her to lie down on one side, in order to Trim, and Caulk the other side. Or a Ship is said to be brought to the *Careen*, when the most part of her Lading, &c. being taken out, she is hall'd down on one side by a small Vessel, as low as necessary; and there kept by the weight of the Ballast, Ordnance, &c. as well as by Ropes, lest her Masts should be strain'd too much; and this is done, that her Sides or Bottom may be Trimm'd, Seams Caulk'd or any thing that's faulty under Water, mended.

*A Ship sails on the Careen*; that is said of a Ship that lies much on one side, when she sails.

*CARGO*: By a *Ship's Cargo*, is meant, the Quantity of Goods that a Merchant-ship is laden with. See *Burden*.

*CARLINGS*, are Timbers in a Ship, lying Fore and Aft along from Beam to Beam, whereon the Ledges rest,

on which the Planks of the Ship are fasten'd: And all the *Carlings* have their Ends let into the Beams Culvertail-wise.

**CARLING-KNEES**, are those Timbers which go athwart the Ship, from her Sides to the Hatch-way, and which bear up the Deck on both sides.

**CARNELS**; so some call those Vessels which go with Misen-sails instead of Main-sails.

**CARNEL-WORK**: In building of Ships, first with their Timbers and Beams, and after bringing on their Planks, is call'd *Carnel-work*, to distinguish it from *Clinch-work*.

**CARPENTER of a Ship**, his Office, when at Sea, is to have all things ready that relate to his business; that is, of keeping the Ship in Repair, as Stopping of Leaks, Fishing the Masts or Yards, Caulking, Breaming, and the like. He hath a *Mate* under him, and a *Crew*, or *Gang*, to Command on necessary Occasions. See *Officers*.

**CARRIAGE of a Gun**, is the Frame of Timber on which a Piece of Ordnance is laid, fix'd, and mounted.

**CARTOUCHE**, the same with Cartridges.

**CARTRIDGES**, are Cases of Paper, or, as now they are usually made for Ships of War, (to prevent Danger from fire in a Gun not well spung'd)

or Parchment, exactly fitted to the Bore of a Piece of Ordnance, and containing its due Charge of Powder. There are also *Tin-Cartridges*, in which the Paper or Parchment ones, are both form'd and carried.

**CASE-SHOT**, is when Musket-Bullets, Stones, old pieces of Iron, &c. are put up into Cases, and so shot out of Great-Guns: They are generally used at Sea, to clear the Enemy's Decks, when they are full of Men.

**CASKETS**, are small Ropes made of Sinnet, and fasten'd to *Gromets*, or little Rings upon the Yards: Their Use is, to make fast the Sail to the Yard, when it is to be furl'd.

*Breast-Caskets*, are the longest or biggest of these, or those in the midst of the Yard, betwixt the Ties.

**CAST a Point of Traverse**, signifies, to prick down on a Chart the Point of the Compass any Place bears from you; or to find what point of the Compass the Ship bears at any Instant, or what Way the Ship has made.

**CATARACT**, is a Precipice in the Chanel of a River, caused by Rocks, or other Obstacles, stopping the Course of its Stream, from whence the Water falls with a great noise and impetuosity; as the *Cataracts of Nile, Danube, Rhine, &c.*



**CAT-HARPINGS**, are small Ropes, running in little Blocks from one side of the Shrouds to the other, near the Deck: Their Use is to force the Shrouds, and make them taught, for the more security and safety of the Masts.

**CAT**, or *Cat-head*, is a short Piece of Timber in a Ship, lying aloft right over the Hawse, having at one end two Shivers, wherein is reev'd a Rope, with a great Iron-hook fasten'd to it call'd *Cat-Hook*: It's Use is to trice up the Anchor from the Hawse to the top of the Fore-castle.

**CAT-HOLES** in a Ship, are over the Ports, as right with the Capstan as they can be: Their Use is, to heave the Ship a-stern, upon occasion, by a Cable, or a Hawser, call'd *Stern-fast*.

**CAT-HOOKS**. See *Cat*.

**CAT-ROPE**. See *Rope*.

**CAULKING** of a Ship, is driving Okum, or the like, into all the Seams of the Planks of the Ship, to prevent Leaking, or keep out the Water.

**CAULKING-IRONS**, are Iron-Chissels for that purpose.

**CHAFE**, or *Chafing* of a Rope, is said of a Rope that is gall'd or fretted, or when a Rope rubs against any thing.

*The Cable is Chafed in the Hawse*; that is, fretted, or begun to be worn out there.

**CHAIN-PUMP**. See *Pump*.

**CHAINS** in a Ship, are those Irons to which the Shrouds of the Masts are made fast to the *Chain-Wails*.

**CHAIN-SHOT**, is two Bullets, or rather Half-Bullets with a Chain between them; they are used at Sea, to shoot down Yards or Masts, to cut the Shrouds, or any Rigging of a Ship.

**CHAIN-WAILS** in a Ship, are the broad Timbers which are made jetting out of her Sides; to which, with Chains, the Shrouds are fasten'd, and by them spread out, the better to secure the Masts.

**CHANNEL**, is a narrow Passage of Sea between two Lands, joining one part of the Sea or Ocean to another part; as the *British Chanel* between *England* and *France*, and the like.

**CHARGE**: A Ship of Charge, is such as draws much Water, or swims deep in the Sea: Though sometimes an unweildy Ship, that will not ware nor steer, is call'd a *Ship of Charge*.

**CHART**, a *Nautical, Marine*, or *Sea-Chart*, is a Description or Draught of any Place, projected on Paper or Parchment, for the benefit of Seamen; discovering the Sea-Coasts, Sands, Rocks, Depth of Water, &c. as also the Latitude, Longitude, Distances and Bearings of Places.

*Plain-Chart*, is a Plat or Chart, used by Seamen, having the Degrees

Degrees of Longitude thereon, made of equal Length with those of Latitude. This *Chart* is very easie and useful in short Voyages: But in long Voyages, except under the Equinoctial, or near a Meridian, 'tis impossible to sail by them, any thing correctly: For few or no Places, but such as lie under the same Meridian, or under the Equinoctial, can be express'd therein, according to their true Distance and Situation one from the other. See *Mercator*.

*Mercator's*, or *Wright's Chart*, is a Projection of the Surface of the Earth in *Plano*; wherein the Degrees upon the Meridian Encrease towards the Poles, in the same Proportion that the Parallel Circles Decrease towards them. This Projection was hinted by *Ptolemy*; and a General *Chart* accordingly was made, and publish'd by *Mercator*, and therefore have ever since bin call'd by his Name: But the Thing Demonstrated, and a ready Way shew'd for Describing it, was not, till Mr. *Wright* taught to Enlarge the Meridian-Line, by the continual Addition of Secants: So that all the Points of Latitude in each Parallel might be protracted in like Proportion with those of Longitude; and therefore will truly shew, in any assign'd Course, the Ship's Motion on an Imaginary Plane, where the Parallels of Latitude are strait Lines, and the Meridians also parallel to one another, by a Method that is

easie, certain, and demonstrable both in Longitude, Latitude, and Distance, and is the only true way of Sailing that is Practicable: And the most Curious and Correct *Chart* of this kind, is that done by the Excellent Mathematician Captain *Halley*; where you have not only the Places justly and accurately laid down, but also the Degrees of the Variation of the Magnetic-Needle, or Sea-Compass, and that by Inspection only; as Design'd by his own Observations, in a Voyage purposely made to the Western and Southern Ocean, at the Public Charge, in the Year of Our Lord, 1700. And these *Charts* are to be Sold by *R. Mount*, and *T. Page*, at the Postern on *Tower Hill*, London.

C H A S E, signifies, the Ship Chased or Pursued.

To Chase, or Giving Chase, is to Pursue a Ship at Sea.

C H A S E R, is the Ship in Pursuit of the Chase.

Stern-Chase, is when the Chase is right a-head with the Chaser.

To lie with a Ship's Fore-foot in a Chase, is to sail the nearest way to meet her, and so to cross her in her way, or to come a-cross her Fore-foot.

A Ship of a good Forward; or Stern Chase, is a Ship that is so built forward on, or a-stern, that she can carry many Guns, to shoot right forwards, or backwards.

In Chasing, these Rules are generally observed: If the Chased be



be found any thing to the Windward, the *Chaser* is to bring all his *Tacks* aboard, and to shape his Course to meet her at the nearest Angle. If the *Chased* be to the Leeward, then the *Chaser* may come in with her; -except she bear upright before the Wind, and so out-sail her; or that she bring her self close by a Wind, and the *Chaser* prove the more Leeward Ship, and so lose her that way.

If the *Chase* be found right-a-head, and so the *Chaser* be put to a *stern-Chase*; then the best Sailer shall carry it, if there be Sea-room, and Day-light.

Being come up close with the *Chase*, endeavour to cross her Fore-foot; and, by that means, you'll both hinder her Way, and avoid the Fury of her Ordnance, (except those in her *Chase*;) and use your own, if required, to more Advantage; and that as well your *Chase* pieces, at your first getting up within reach, as your Broad-side, and Quarter-pieces, as you pass *thwart* her *Hurricane*; and scour her Decks from Stem to Stern.

If she makes away from you, ply your Guns, as many as possible, at her Sails, Yards, Masts, and general Tackling: And being near, spare not your Case-shot, or Cross-bar-shot, to make the greater Damage.

**CHASE-GUNS**, are such, whose Ports are either in the Head, (and then they are used in Chasing others;) or in

the Stern, (which are only useful, when they are Chased, or or Pursued by another Ship, or Ships.

**CHASE** of a Gun, is its whole Length.

**CHECK** the Bow-line. See *Bow-line*.

**CHECQUE**, Clerk of the *Cheque*. See *Clerk*, and *Officers*.

**CHEEKS**, are two Pieces of Timber, fitted on each side of the Mast, at the Top serving to strengthen the Masts there. The uppermost Rail, or Piece of Timber, in the Beak of a Ship, is call'd the *Cheek*. The Knees, which fasten the Beak-head to the Bow of the Ship, are call'd *Cheeks*. And the sides of any Block; or the Sides of a Ship's Carriage of a Gun, are call'd *Cheeks*.

*Upper and Lower Cheeks*, are those Pieces of Timber on each side of the *Trail-board*.

**CHESSE-TREES**, are two small Pieces of Timber, with a Hole in them, on each side of the Ship, a little before her Loof; their Use is, for the Main-Tack to run thorow, and to hale it down to.

**CHEST-ROPE**S. See *Ropes*.

**CHEVILS**, the same with *Knevels*.

**CHIRURGEON**, the same with *Surgeon*; which see.

**CLAMPS**, in a Ship, are those thick Planks, which lie Fore and Aft, under the Beams

of the First *Orlop*, or Second-Deck; bearing them up at either End; and are the same that the *Rising-Timbers* are to the *Deck*.

**CLEAR** the *Harve*. See *Harve*.

**CLEAT**, is a Piece of Timber, fasten'd on the Yard-Arm of a Ship, to keep the Ropes from slipping off the Yard.

**CLERKS** of the *Cheque*, are Officers belonging to the Principal *Dock-Yards*; they are employ'd in Mustering the Workmen in the Yards; the Ship's Company, within Reach; and *Chequing* them out of Wages, when Absent. See *Officers*.

**CLERKS** of the *Survey*. See *Officers*.

**CLEW** of the *Sail*, is the lower-corner of it, to which are made fast the *Sheats* and *Tacks*: A square *Sail* hath no *Clew*.

A *Sail* with a great *Clew*; that is, with a great goaring, or flopping down.

To *Spread* a great *Clew*; that is said of a Ship that has a very long *Yard*, and therefore has much *Canvas* in her *Sail*.

**CLEW-GARNET**, is a Rope made fast to the *Clew* of the *Sail*, and running from thence to a Block seiz'd to the middle of the *Main*, and *Fore-Yard*; which, in *Furling*, does hale up the *Clew* of the *Sail* close to the Middle of the *Yard*.

**CLEW-LINE**, is the same to the *Top-fails*, *Top-*

*gallant-fails*, and *Sprit-fail's*, that the *Clew-garnet* is to the *Main-fail* and *Fore-fail*, and has the same Use. In a Gust of Wind, when a *Top-fail* is to be taken in, 'tis usual first, to hale home the *Lee-Clew-Line*; then 'twill be easier to take in the *Sail*.

**CLINCH-BOLTS**. See *Bolts*.

**CLINCH** of a *Cable*, is that part of it which is bended about the Ring of the *Anchor*, and then seized, or made fast.

**CLINCHING**, is a kind of slight *Caulking*, used at Sea, in a prospect of *Foul-weather*, about the *Ports*; that is, to drive a little *Okum* into their *Seams*, to prevent the *Water's* coming in at them.

**CLOATHED**: A *Mast* is said to be *Cloathed*, when the *Sail* is so long, as to reach down to the *Gratings* of the *Hatches*; so that no *Wind* can blow below the *Sail*.

A *Ship* spreads much *Cloth*; that is, she has *Broad Sails*.

**CLOSE-QUARTERS**. See *Quarters*.

**CLOYED**: The *Touch-hole* is *Cloyed*; that is, something is got into the *Touch-hole*; so that with the *Priming-Iron*, way cannot be made, for the *Powder* to be put in, to *Prime* her.

**COACH**, is the *Council-Chamber* on-board a *Flag-Ship*.

**COAMINGS**, or *Coomings*, are those *Planks*, or that *Frame*, which lie upon the *Carling-*



*Carling-knees*, and bear up the Hatches higher than the rest of the Decks, to keep the Water from running down at the Hatches; and in which also Loop-holes, for Muskets to shoot out at, are usually made; in order to Clear the Decks of the Enemy, when a Ship is Boarded.

**C O A S T I N G**, is that Part of *Navigation*, where the Places assign'd, are not far distant, so that a Ship may sail in sight of Land, or within Soundings between them. In this, there is only required a good Knowledge of the *Land*, the Use of the *Compass*, and *Lead*, or *Sounding-Line*: Such are the Voyages in the *British Seas*, between *England*, *Holland*, and *France*, in the *Mediterranean*, and *Baltic-Seas*.

**C O A T S**, are Pieces of Tarr'd-Canvase which are put about the Masts, at the *Partners*, to keep out Water: They are also put about the Pumps at the Decks, that no Water may go down there; and such are also used at the *Rudder's-head*.

**C O C K - B O A T S**, are Small Boats used in Rivers, or near the Shoare: They are of no service at Sea, because too tender, weak, and small.

**C O C K S**, are little square Pieces of Brass, with Holes in them, put into Wooden-shivers, to keep them from splitting, and galling, by the Pin of the Block.

**C O C K - P I T**, is a Place on the Lower Floor, or Deck, abaft the Main-Capstan, lying between the Platform, or *Orlop*, and the Steward's-Room; where are Partitions, for the Purser, the Surgeon, and his Mates.

**C O C K S W A I N**, or *Coxson*, is an Officer a-board a Man of War, who has the care of the *Barge*, or *Shallop*, and all things belonging to it; to be always ready with his Boat's-Gang, or Crew, and to Man the Boat, on all Occasions: He sits at the Stern of the Boat, and steers; and has a Whistle, to Call and Encourage his Men.

**C O I L E**, the same with *Quoil*; which see.

**C O I N S**, or *Quins*, are Wedges of Wood, serving to raise, or lower the Breech of a Gun, upon Occasion.

*Canting-Coins*, are little short Pieces of Wood, or Billets, cut Wedge-like, to lie betwixt the Casks.

*Standing-Coins*, are Billets, or Pipe-staves, to keep the Casks from stirring, or giving way.

**C O L L A R** of a *Ship*, is a Rope fasten'd about her Beak-head, unto which the *Dead-man's-eye* is seiz'd, that holds her Main-stay. And that Rope which is wound about the Main-mast head, to save the Shrowds from galling, is called also a *Collar*.

**C O M B**, in a *Ship*, is a little Piece of Timber, set under the lower-part of the Beak-head, near the middle: It has two

Holes in it ; and supplies to the *Fore-tacks*, what the *Chest-trees* do to the *Main-tacks* ; that is, to bring the *Fore-tacks* a-board.

COMPASS, in *Navigation*, is an Instrument to direct the Ship's Course by ; being a Round Box, with a graduated Circle, drawn on a Card, or Pastboard, hanging Horizontally therein, by means of a Brass Centre, or Cap, on an Erect Pin : The Card is divided into Four Quarters, representing the Four *Cardinal-Winds*, or *Principal Points*, *East*, *West*, *North*, and *South* ; and each Quarter subdivided into Eight other Equal Parts, making in all Two and thirty *Points*, or *Rhumbs*. And under the Card, from *North* to *South*, is placed a *Magnetic-Needle*, or *Wire* ; whose Ends, touch'd by a *Loadstone*, always stand towards the *North*, and *South* ; tho' in different Parts of the World, with different *Variations* from those *Points*. This Instrument is kept in the *Binnacle* ; hanging so in Brass-Rings, as to give such Way to the Motion of the Ship, that the Box will stand Horizontally steady. And by Steering by this *Compass*, (well Made, and duly Rectified,) is known how, or which Way the Ship sails, at all Times ; and how to keep in, and direct her to, her true Course.

*Fly of the Compass*, is the same with the *Card*, or the round piece of Pastboard which has the *Points* drawn thereon ; and the

*Magnetical-Needle*, or *Touch'd-Wire*, underneath.

*Variation of the Compass*, is the Deflection of the *Magnetical-Needle* from the true *Meridian* ; or that *Arc* of the *Horizon*, (either *Eastward*, or *Westward*,) intercepted between the *True*, and *Magnetical-Meridian* : And is found, either by the *Sun's Amplitude*, or *Azimuth* ; as is seen in most Books of *Navigation*. And this *Variation* is not always the same, in the same Place ; but varies, in process of Time, from what it was.

Who it was that Discover'd this Useful Property of the *Loadstone*, is unknown ; tho' tis conjectured, by very Eminent Persons, that the *Sea*, or *Magnetic-Compass*, was first made by an *English-man*. But we are certain, that the *Phænomena* of the *Variation of the Compass*, have bin Accounted for, only by our Learned Captain *Halley*, (now *Savilian Professor of Geometry* in *Oxford* ; to whom the World is entirely Obliged, for his Excellent *Theory*, and Wonderful Discoveries in this Subject : as also for his most-Curious *Chart of the World*, after Mr. *Wright's Projection* ; wherein the *Variation of the Needle* is found at any Place by *Inspection* : The want of which, render'd one of the Noblest Inventions, in a manner, useless.

AZIMUTH - COMPASS, is an Instrument made of Brass, resembling the Common *Sea-Compasses* ; but has a Broad Limb.



Limb, graduated Diagonally, with an Index, and Thread; and is fitted up in a square Wooden-Box, with Jambols, and other Contrivances, for a free liberty of hanging Horizontally: It chiefly serves for taking the Sun's Azimuth, or Amplitude, in order to find the Difference between the *Magnetic Meridian*, and the *True Meridian*, which shews the *Variation of the Compass*. These Instruments, if truly wrought, are very useful for that Purpose; and are excellently made, as also all Things of this Kind, by Mr. *Richard Glynn*, a very Skilful and Accurate Mathematical Instrument-Maker, next Door to the *Latin Coffee-House* in *Ave-Maria-Lane*, near *St. Paul's*, London.

CON'D, *Con*, or *Cun*, is to Guide, or Direct the Ship in her right Course, or to give Words of Direction to the Man at Helm, how to Steer. And he that *Con's* the Ship, uses these Terms to him at Helm:

*Starboard*, or *Port*, the *Helm*; that is, Put the Helm a *Starboard*, or to the *Larboard*; that is, to the Right, or Left of the Ship; and then the Ship will go to the *Larboard*, or *Starboard*: For the Ship always sails contrary to the *Helm*.

*Right the Helm!* or, *Helm a Midship!* that is, Keep it right up; or in the *Midships*, when 'tis required the Ship should go right before the Wind.

*Alorf!* or, *Luff!* Keep your *Loof!* Fall not off! *Veer no more!* Keep her to! *Touch the Wind!* Have a care of the *Lee-latch!* are Directions much to the same purpose; imp'ying only, that the *Steers-man* shou'd keep the Ship near the Wind.

*Ease the Helm!* No *Near!* *Bar up!* That is, Let her fall to *Leeward*; or sail more Large, or more *Before* the Wind.

*Steady!* *As you go!* That is, Keep her upon the same Point; or, Keep her from going in and out, or making *Taws*; whether she sails Large, or *Before* the Wind.

*Keep her Thus!* *Thus!* That is, Let her go just as she does.

CONTINENT, is a vast Continued Space of Land, containing many Countries, and Kingdoms; and consequently, not easily discernible to be surrounded with the Sea.

CONVOYS, are *Ships of War*, employed for the Security and Safety of particular Traders; to prevent their being Insulted, in Time of War.

COOK, *Ship's Cook*; whose Business is, to Dress, and Deliver out the Victuals. He has a *Mate*. under him.

COOK-ROOM, is the Place where the Victuals are Dress'd: In some Ships, 'tis seated in the *Hold*; but generally in the *Fore-castle*, where there are Furnaces contriv'd, and other Necessaries, for the Purpose.

**COOPER**, *Ship's Cooper*, is he that looks to the Casks, and all other Vessels, for Beer, Water, or any other Liquor. He has a *Mate*, under him.

**CORDAGE**, signifies in general, all the Ropes belonging to the Rigging of a Ship.

**CORPORAL** of a *Ship*, is an Officer that has the Charge of Setting and Relieving the Watches, and Centries; and sees all the Soldiers and Sailers keep their Arms Clean, and Neat; and teaches them their Use. He has a *Mate* under him.

**COUNTERS** in a *Ship*, are Parts of her: As,

*Upper-Counter*, is the Hollow Arching from the *Gallery*, to the lower part of the *strait Piece* of the *Stern*.

*Lower-Counter*, is between the *Transom* and the lower part of the *Gallery*.

**COURSE** of a *Ship*, is that Point of the *Compass* on which she sails; and is indeed, the Angle, that the *Rhumb-Line* steer'd upon, makes with the *Meridian*.

**COURSE**, in a *Ship*, are her *Main-sail*, and *Fore-sail*; which are call'd, the *Main* and *Fore-Course*.

To *Sail under a Main-Course*, and *Bonnet*; is, to sail under *Main-sail*, and *Bonnet*.

To *go under a Pair of Courses*; that is, to sail under *Main*, and *Fore-sail*, without lacing on any *Bonnets*.

**COXSWAIN**, the same with *Cockswain*.

**CRABB**, is an Engine of Wood with three Claws, placed on the Ground, for Launching of Ships, and to heave them into the Dock.

**CRADLE**, is a Timber-Frame, made along the Out-side of a Ship, or Galley, by the *Bildge*; serving for the more secure and commodious Launching of her.

**CRAFT**, at *Sea*; signifies, all manner of Lines, Nets, Hooks, &c. which serve for Fishing.

*Small-Craft*, are all such little Vessels; as *Ketches*, *Hoys*, and *Smacks*; made use of, in the *Fishing-Trade*.

**CRANE-LINES**, in a *Ship*, are Lines going from the upper-end of the *Sprit-sail-top-mast*, to the middle of the *Fore-stays*; they serve to keep the *Sprit-sail-top-mast* upright and steady in its Place, and to strengthen it; in order that it might bear its *Yard* and *Sail* the better.

**CRANK-Sided**, is said of a Ship that cannot bear her Sails; or can bear but small Sail, for fear of *Over-setting*.

**CRANK** by the *Ground*; that is said of a Ship that cannot be brought on the *Ground*, without danger of *Overthrowing* her.

**CREEK**, is a small Bay, or Nook, by the *Shore*.

**CRENCLES**, in a *Ship*, are small Ropes, spliced into the Bolt-Ropes of the Sails of the *Main mast*, add *Fore-mast*: They are fasten'd to the *Bow-line-Bridles*;



*Bridles*; and are also to hold by, when a *Bonnet* is shaken off.

**CREW**, *Ship's Crew*, or *Boats's Crew*; that is, the Seamen belonging to a *Ship*, or *Boat*. There are also in a *Ship*, several particular *Crews*, or *Gangs*; as the *Gun-Room Crew*, belonging to the *Gunner*; the *Carpenters Crew*, &c.

**CROSS-Barr-Shot**, is a great *Shot*, or *Bullet*, with a *Barr* of *Iron* put thorow it.

**CROSS-Jack-Yard**, is a small *Yard*, slung at the upper-end of the *Mizen-mast*, under the *Top*. It has no *Halliards*, nor *Ties*, belonging to it. Its Use is, to spread and hale out the *Mizen-top-sail Sheats*.

**CROSS-Piece**, is a great *Piece* of *Timber*, going a-cross the *Bolts* of a *Ship*: To this the *Cable* is *belay'd*, when the *Ship* *Rides* an *Anchor*.

**CROSS-Staff**, or *Fore-Staff*, is an *Instrument*, made commonly of *Box*, or *Pear-tree*, with *Siding Vanes*: 'Tis used at *Sea*, for taking the *Altitude* of the *Sun*, or *Star*, &c. in order to find the *Latitude*.

**CROSS-Trees**, in a *Ship*, are four *Pieces* of *Timber*, bolted, and let-in to one another a-cross, at the *Head* of the *Mast*: Their Use is, to keep and bear the *Top-masts* up; for the *Foot* of the *Top-mast* is always fasten'd into them: But some call only those two of these *Timbers* which go a-thwart *Ships*, the *Cross-*

*Trees*; and then, they call the others, the *Tressel-Trees*.

**CROSS**; To *Ride a-cross*. See *Ride*.

**CROSS-Tree-Yard**, is a *Yard*, standing square, just under the *Mizen-top*; and to it the *Mizen Top-Sail* is fasten'd below.

**CROW-FEET**, are small *Lines*; or *Ropes*, sometimes six, eight, or ten, reev'd thorow the *Deadmens-Eyes*: They are scarce of any more Use, than to make a *Shew* of small *Rigging*. They are placed at the bottom of the *Back-stays* of the *Fore-top-mast*, *Mizen-top-mast*, and *Gallant-top-mast*.

*The Spritsail-Top-sail Crow-Foot*, is a *Rope*, divided into two, or four *Portions*, from the upper-end of the *Spritsail-Top-mast*, to the *Fore-top-mast-Stay*.

**CRUISERS**, are small *Men of War*, made use of, to and fro, in the *Chanel*, and elsewhere, to secure our *Merchant-Ships*, and *Vessels*, from the *Enemies* small *Frigats*, and *Privateers*: They are generally those that *Sail* well, and therefore are commonly well *Mann'd*: And indeed, the *Safety* of the *Trade* in the *Chanel*, and up and down the *Soundings*, and other *Places*, does absolutely require the constant keeping out of such *Ships* at *Sea*.

**CUBBRIDGE-HEADS**, are the *Bulk-heads* of the *Fore-Castle*, and the *Half-Decks*; wherein there are placed *Murdering-Pieces*, &c. to *Clear* the *Decks*,

Decks, *fore and aft*, upon Occasion.

CUDDY, in Great Ships, is a Place lying between the Quarter-Deck, and the Captain-Lieutenant's Cabin, under the Poop; and is divided into Partitions, for other Officers.

CULVER-TAIL'D, signifies, the fasting, or letting of one Timber into another, so that they cannot slip out; as the *Garlings*, into the *Beams* of a Ship.

CUN, or CUNNING, the same with *Cond*; which see.

CURRENTS, are the impetuous Motions of the Waters, which in certain Latitudes run, and set on particular Points of the *Compass*: And commonly, their Force is conformable to the Course of the *Moon*; so as to be more rapid, or strong, when She is in the *Change*, or at *Full*; and more weak, in her *Wain*.

CUT a Feather: If a Ship has too Broad a *Bow*, 'tis common to say, She will not *Cut a Feather*; that is, She will not pass thro' the Water, so swift, as to make it foam, or froth.

CUT-WATER, or *Knee of the Head*, is the Sharpness of the Head of the Ship, below the *Beak*: And is so called, because it *Cuts*, or *Divides* the Water, before it comes to the *Bow*.

## D

DAILE, is the Trough wherein the Water does run over the Decks.

DAVIS'S *Quadrant*. See *Back-Staff*.

DAVIT, in a *Ship*, is a short Piece of Timber, with a Notch at one end, wherein, by a Strap, hangs the *Fish-Block*. The Use of this *Block*, is to help up the Fluke of the Anchor, and to fasten it at the Ship's *Bow*, or *Looff*. The *Davit* is shiftable from one side of the Ship, to the other, as there is Occasion.

DEAD-MENS-EYES, are Blocks with many Holes, but no Shivers: Thro' them the *Lanniers* go, which make fast the *Shrowds*, below the *Chains*. And sometimes the *Main-stays* are set taught, by these *Dead-Mens-Eyes*, and *Lanniers*. Thro' these, also, the *Crow-Feet* do reeve.

DEAD-RECKONING, at *Sea*, is that Estimation, Judgment, or Conjecture, which the Seamen have of the Place where the Ship is, by keeping an Account of her *Way*, or *Distance Run* by the *Log*; by knowing the *Course* they have *Steer'd*, by the *Compass*; and by Rectifying all, with Allowance for *Lee-way*, *Currents*, &c. with Consideration of the Ship's *Trim*, &c. So that this *Reckoning*, is without any *Observation* of the *Sun*, or *Stars*; and is to be



be rectified, as often as any good Observation can be had.

**DEAD-RISING**, is that part of a Ship which lies *aft* between the *Keel* and the *Floor-Timbers*, next adjoining to the *Stern-Post*, under the *Bread-Room* in a *Ship of War*.

**DEAD-ROPE**S, are such as does not run in any *Block*.

**DEAD WATER**, is the *Eddy-Water* just *a-stern* of a *Ship*; and is so call'd, because it does not pass away so swift, as the *Water* running by her *Side* does.

*A Ship makes much Dead-Water*; that is, She has a great *Eddy* following her *Stern*.

**DECK**, of a *Ship*, is a *Plank'd-Floor* from *Stem* to *Stern*, whereon the *Guns* lie; and on which the *Men* walk to, and fro. *Great Ships* have *Three Decks*, *First*, *Second*, and *Third*, beginning to account from the *Lowermost*.

*Half-Deck*, reaches from the *Main-mast*, to the *Stem* of the *Ship*.

*Quarter-Deck*, is that aloft the *Steerage*, reaching to the *Round-house*.

*Flush-Deck*, is that which lies even in a *Right-Line*, *fore and aft*, from *Stem* to *Stern*.

*Cambered-Deck*, is that which lies compassing; and is by no means proper for a *Man of War*.

**DECLINATION** of the *Sun*, or *Star*, is in an *Arc* of a *Great Circle*, intercepted between the *Sun*, or *Star*, and the *Equi-*

*noctial*: And is easily found by this

**PROPORTION**;

*As the Radius, or Sine of 90 Degrees,*

*To the Sine of the Sun's greatest Declination :*

*So is the Sine of the Sun's Equinoctial Distance,*

*To the Sine of the Sun's present Declination.*

When an *Observation* of the *Sun's Meridian Altitude* is made, in order to find the *Latitude of the Place*; The *Sun's Declination* also must be known; as usually, and readily, by means of *Tables* carefully Calculated for that Purpose; such as those in *Mr. Jones's Treatise of Navigation*, *Edit. 2<sup>d</sup>*.

**DEEP-SEA-LINE**, or *Dip-Sea-Line*, is a small *Line*, to *Sound* with, some *150 Fathom* long; with a long hollow *Plummet* at the *Head*, and *Tallow* put into it, that will bring up any *Gravel*, *Stones*, *Sand*, *Shells*, and the like, from the *Bottom*; and to know the *Differences of the Ground*: Which having bin before *Discover'd* by other *Observations*, and *Entred* into their *Books*; they guess, by their *Soundings*, what *Coast* they are upon, tho' they cannot see *Land*. If it happens that no *Ground* come upon the *Tallow*, they conclude, they are upon *Ouzie-Ground*: Which they *Discover* again, by *Sounding* with a *Wollen-Cloth* upon

upon the Lead, whereby this Ground will be brought up. This Line is first mark'd at 20 Fathom; and afterwards increased, by 10's, to the End; distinguished by so many small Knots upon each little String, that is fix'd at the Mark, shew the Shrowds, or midst of the Line; shewing it is so many times 10 Fathom deep, where the Plummer does rest, from drawing the Line out of One's Hand. 'Tis used only in Deep Waters, when the Seamen think they approach the Shore.

**DEFLECTION**, at Sea, is the Tendency of a Ship from the true Course, by reason of Currents, &c. which turn her out of her right Way.

**DEGREE**, the 360th Part of the Periphery of a Circle. See *Mercator's Chart*.

**DEPARTURE**, in Navigation, is the nearest Distance between any two Meridians, counted on the Parallel of Latitude; shewing how far one Place is to the Eastward or Westward of another, in Degrees, or Miles, proper to the Parallel of Latitude.

**DIFFERENCE of Latitude**, in Navigation, is the nearest Distance of any two Parallels of Latitude; shewing how far one Place is to the Northward or Southward of another: And it never exceeds 180 Degrees. See *Latitude*.

**DIFFERENCE of Longitude**, or *Meridional Distance*, in Navigation, is the Distance on the Equinoctial, which is contain'd

between the Meridians of any two Places; shewing (in the Equinoctial) how far the Meridian of one Place is to the Eastward or Westward of the Meridian of another.

**DISEMBOGUE**, at Sea: When a Ship passes out of the Mouth of some great Gulf, or Bay, they call it *Disemboguing*. Also, 'tis said of a River, That at such a Place, or after it has run so many Leagues, it *Disembogues* it self into the Sea. Thus, the *Volgo Disembogues* it self into the *Caspian*; and the *Danube*, into the *Euxine-Sea*.

**DISTANCE Run**, in Navigation, is the Number of Miles, or Leagues, that a Ship has sailed from any given Point. 'Tis usually found by the *Log-Line*; which see.

*Meridional Distance*. See *Meridian*.

**DIVISION**, is the Third Part of a Fleet of Men of War: But sometimes 'tis the Ninth Part; which happens, when the Fleet is Divided into Three Squadrons; for then each Squadron is distributed into Three Divisions. As 'twas practis'd by the Fleets of England and France, jointly, in the Years 1672, and 1673: The English Fleet form'd Two Squadrons, the *Red*, and the *Blue*, each distributed into Three Divisions: The French Fleet, which form'd the *White Squadron*, was also distributed into Three Divisions.

In a Sea-Engagement, the Order of Battle, is, To place in one Line



Line, all the *Squadrons*, and all the *Divisions* of the Side: And this Order is kept, as long as Wind, Valour, and Fortune, will permit. See *Engagement*.

DOCK, is a Pit, Pond, or Creek, by the Water-side, made convenient either to Build, or Repair Ships in: And is either,

*Dry-Dock*, where the Water is kept out, by great *Flood-Gates*, till the Ship is Built, or Repair'd; then the Gate is open'd, and the Water let in, to Float, and Launch her.

*Wet-Dock*, a Place where the Ship may be haled into, out of the *Tide's Way*; and so *Dock* her self, or *Sink* her self a Place to lie in.

DOCK-YARDS, are the Magazines of all sorts of Naval-Stores: The Principal one's, are those at *Chatham*, *Portsmouth*, *Plimouth*, *Woolwich*, *Deptford*, and *Sheerness*. In Time of Peace, *Ships of War* are laid up in these *Docks*: But the Biggest, and greatest Number of the Biggest Ships, are lodged at *Chatham*; where, and at other Yards, they receive, from time to time, such Repairs as are necessary.

These *Yards* are generally supplied, from the *Northern Crowns*, with *Hemp*, *Pitch*, *Tar*, *Rosin*, and several other Species: But as for *Masts*, particularly those of the Largest size, they are brought from *New-England*.

How much it imports the Good of the Public, to keep those Magazines constantly replenish'd,

every One is able to judge: And And it were much to be wish'd, the Improving the afore-mention'd Commodities in our *English Plantations*, might meet with all possible Encouragement; lest, one time or other, it may prove difficult to get them elsewhere. It is reasonable to think, such an Undertaking will put the Nation to some Considerable Charge, e're it be brought to Perfection; but when so, many are the Advantages that will arise from it.

DOGGAR, is a Small Ship, built after the *Dutch Fashion*, with narrow Stern; they carry commonly but one Mast.

DOMESTIC - Navigation, is, Coasting, or Sailing along the Shore; in which, the *Lead*, and *Compass*, are the chief *Instruments*.

DOUBLE-Blocks. See *Blocks*.

DOUBLE the *Cape*, or *Point*; that is, to Come up with it, Pass by it, and so leave it behind.

DRABLER, a small Sail in a Ship; being the same to a *Bonnet*, that a *Bonnet* is to a *Course*; and is only used, when the *Course* and *Bonnet* are too *Shoal* to Cloath the *Mast*.

DRAGS: *Sea-Drags*, are whatever hangs over the Ship, in the the Sea, as *Shirts*, *Coats*, or the like: And *Boats*, when *Tow'd*, or whatever else, that, after this manner, may hinder the Ship's Way, when she sails, are call'd *Drags*.

**DRAUGHT** of a *Ship*, is so many Feet as she *Draws*; that is, as she sinks into the Waters. So that if a *Ship* sink into the Water 18 Feet Perpendicular, she is said to *Draw* 18 Feet Water: And therefore her *Draught* is said to be more or less, as she *Draws* more or less Water.

**DRIFT**, at *Sea*: Any thing that floats upon the Water, is is said to *Run a Drift*.

**DRIFT-SAIL**. See *Sail*.

**DRIVE**: A *Ship* *Drives*, when an *Anchor* being let fall, will not hold her fast; but that she sails away with the *Tide*, or *Wind*. The best Help, in this Case, is to let fall more *Anchors*, or to *veer out more Cable*; for the more *Cable* she has out, the safer she *rides*.

The *Ship* *Drives to Leeward*, is usually said of a *Ship* that lies a *Hull*, or a *Try*.

**DRIVE-BOLTS**. See *Bolts*.

**DRY-DOCK**. See *Dock*.

**DUCKING** at the *Main-Yard-Arm*, is a Way of Punishing *Sea-Offenders*: And is perform'd thus; The Malefactor has a *Rope* fasten'd under his *Arms*, about his *Middle*, and under his *Breech*; and so is hoisted up to the *End* of the *Yard*; from whence he is violently let down into the *Sea*, sometimes twice, sometimes three several times, one after another.

And if the *Offence* be very great, he is also drawn underneath the very *Keel* of the *Ship*;

the which they call *Keel-Haling*, or *Keel-Raking*.

The *Criminal* being underwater, a *Great-Gun* is fired right-over his *Head*; as well to astonish him the more, as to give *Warning* to all *Others*, to *Look out*, and *Beware*.

Other *Punishments* there are, at *Sea*; as particularly those at the *Jeer-Capstan*, and *Bilboes*.

That at the *Capstan*, is, when a *Capstan-Barr* being thrust thro' the *Hole* of the *Barrel*, the *Offender's Arms* are *Extended* at the full length, cross-wise, and so *Tied* unto the *Barr*; having, sometimes, a *Basket* of *Bullets*, or some other-like *Weight*, hanging by his *Neck*: In which *Posture* he continues till he be either brought to *Confess* some *Plot*, or *Crime*, whereof he is *Suspected*; or that he has *Suffered*, what he is *Censured* to *Undergo*, at the *Discretion* of the *Captain*.

The *Punishment* by the *Bilboes*, is, when an *Offender* is laid in *Irons*, or in a kind of *Stocks*, that they use for that *Purpose*; and which are more or less *Ponderous*, as the *Quality* of the *Offence* is, which he is *Guilty* of.

**DUCK-UP**, is a *Term* used by the *Steer's-man*, or *Man at Helm*, when either *Main-sail*, *Fore-sail*, or *Sprit-sail*, hinders his seeing to *Steer* by a *Land-Mark*: And then his *Word* is, *Duck-up the Clew-Lines* of those *Sails*! that is, *Hale the Sail* out of the *Way*!

Also,



Also, When a Shot is made by a *Chace-Piece*; if the *Clew* of the *Sprit-sail* hinders the Sight; then they call, *Duck-up the Clew-Lines of the Sprit-Sail!*

## E

**E**ARING, Is that part of the *Bolt-Rope*, which, at the four Corners of the Sail is left open, in the shape of a *Ring*: The two Uppermost parts are put over the Ends of the *Yard-Arms*, and so the Sail is made fast to the *Yard*: And into the Lowermost *Earings* the *Sheets* and *Tacks* are seiz'd, or bent at the *Clew*.

**EASE!** That is, Make more *S'lack!* or, Let go *Slacker!*

*Ease the Bow-Line!* or, *Ease the Sheet!* That is, Let it be more *Slack!*

*Euse the Helm!* That is, Let the Ship go more *Large*; or more *before the Wind*; or more *Larboard*.

**EAST**, is One of the Four *Cardinal-Points* of the World; and is that Point of the *Horizon*, where the *sun* is seen to Rise, when 'tis in the *Equinoctial*: So that when the *Sun* Rises *due East*, it makes Equal Days and Nights over all the World.

**EASTERN-Amplitude**, is an Arc of the *Horizon*, intercepted between the Point of the *Sun's* Rising, and the *East-Point* of the *Magnetic-Compass*.

**EASTERN-Hemisp'ere.** See *Hemisphere*.

**EASTING.** See *Departure*.

**EBB**; is the Reflux of the Sea, when the Water begins to Fall: And according to its several Degrees of *Ebbing*, 'tis distinguish'd into *Quarter-Ebb*, *Half-Ebb*, *Three-quarter-Ebb*, *Low* (or *Dead-Low*) *Water*.

**EDDY-Tide**, or *Water*; is, where the *Water* runs back, contrary to the *Tide*; or, which hinders the free Passage of the *Stream*, and so causes it to Return again.

**EDDY-Wind**; is that which returns, or is beat back, from a *Sail*, *Mountain*, or any thing that may hinder its Passage.

**EDGE in with a Ship**; is said of a *Chase*, that is *making up* to him.

**END for End**: When a *Rope* runs all out of the *Block*, that it is unrecv'd; they say, *'Tis run out End for End*.

*The Cable at the Hawse is run out End for End*; that is, the *Cable*, or *Hawser*, is all run out at the *Hawse*.

**ENGAGEMENT**, *Sea-Engagement*: Whenever a *Fleet* of *Men of War* is *Engaged*, whether to Give, or to Take *Battle*, with another every way *Equal* unto it; then every *Squadron* of such *Fleet* does usually Order and Subdivide it self into Three *Equal Divisions*; with a *Reserve* of certain Ships out of every *Squadron*, to bring up their *Rear*. And every one of these, observing a *due Birth*, and *Distance*, are, in the *Engagement*, to *Second* one

one another : And the better to avoid Confusion, and *Falling-foul* on one another ; to Charge, Discharge, and Fall off by Threes, or Fives, more or less, as the Fleet, in Gross, is greater, or smaller. The Ships of *Reserve*, being to be instructed either to Succour and Relieve those that be any Way *Engaged*, and in Danger ; or to Supply, and put themselves in the Place of Those that shall be made Unserviceable. This is the Order and Course to be constantly Kept, and Observed, during the whole Time of Battle.

If the *Fight* should continue, even within the Night ; it may well be maintain'd, and kept in this very Order, if so be that every Ship do but carefully heed the *Admiral* of his particular *Squadron*, by his *Eight* ; and withal, his *Leading Ship*, that is next before him ; that so, when the *Admiral falls off*, and makes a Retreat, for the present, upon some especial Occasion ; all the Ships of that *Squadron* may do the like ; and Retire under their several *Livisons*, to Amend and Repair any thing that has bin Miscarry'd in the *Fight*, or to Speak and Advise with their Commanders ; and so to be ready to renew the *Engagement*, and to Re-Charge the Enemy, according to their Instructions.

It is also carefully Observed by all *Admirals* ; That they so Order and keep themselves, in their several *Divisions*, as

they may best be seen and distinguish'd by their whole *Squadron*, and that as well by Night, as Day ; that so Directions may best be given, and Notice taken from, by every particular Ship of the *Fleet* ; and the Executions of Orders, perform'd with the more Facility, and Certainty.

As for a *Fleet* which consists but of few Ships, and being to fight in an open Sea, it should be brought up to Battle in one only Front, with the *Chief-Admiral* in the Middle of them ; and on each side of him, the strongest and best-provided Ships of the *Fleet* ; who keeping themselves in as convenient a Distance as they shall be able, are to have an Eye and Regard, in the *Fight*, to the Weakest and Worst Ships of the *Party* ; and to Relieve, and Encourage them, upon all Occasions ; and withal, being near the *Admiral*, may both Guard him, and aptly receive Instructions from Him.

ENSIGNS ; are the *Colours* placed in the *Sterns*, or *Poops*, of *Ships* : And there are few Ships, whether *Men of War*, or *Merchants*, but have their *Ensigns*. Their chief Use, is, That when any strange Ships meet at Sea, or make into any Harbour ; by *heaving out the Colours* in the *Poop*, that is, putting these *Ensigns* abroad, of what Part, and Country they are.

Thus the *English* heave out their *Colours*, with *St. George's-Cross*



Cross in it ; the *Scotch*, with *St. Andrew's* ; and so all other Countries, with some peculiar Distinction, whereby they may be known. And these *Ensigns* serve for various other Uses, too many here to enumerate. See *Flags*.

ENTRING-LADDERS, in a *Ship*, are of two sorts ; one is used by the *Ship's Sides*, in a *Harbour*, or in *Fair-Weather*, for Persons to go in and out of the *Ship*. The other is made of *Ropes*, with small *Staves*, for *Steps* ; and is hung out of the *Gallery*, to enter into the *Boat*, or to come aboard the *Ship* from thence, when the *Sea* runs so high, that they dare not bring the *Boat* to the *Ship's Side*, because of the danger of *staving* her.

ENTRING-PORT : See *Ports*.

ENTRING-ROPES See *Ropes*.

ENTRING a *Ship*, the same with *Boarding a Ship* ; which see.

EQUATOR ( on the *Earth*, ) or *Equinoctial* ( in the *Heavens*. ) is that great *Circle*, whose *Poles* are those of the *World* ; and which is supposed to Divide the *Globe* into Two Equal Parts, call'd the *Northern* and *Southern Hemispheres*. This *Circle* passes thro' the *East* and *West* Points of

the *Horizon* : Therefore, at the *Meridian* is raised as much above the *Horizon*, as is the *Complement of the Latitude of the Place*.

All the *Stars* which are under this *Circle*, that is, such as have no *Declination*, do always Rise due *East*, and Set due *West*. And the *Sun*, when 'tis said to come to this *Circle*, makes Equal *Days* and *Nights* all round the *Globe* ; for then he is said to Rise due *East*, and Set due *West* ; which he does at no other Time of the *Year*.

Those that live under this *Circle*, have their *Days* and *Nights* Equal : And the *Sun*, at *Noon*, is in their *Zenith*, and therefore casts no *Shadow*.

The *Declination*, or *Latitude*, is reckon'd on the *Meridian*, from this *Great Circle*, either *North* or *South* : And those *Circles* which are suppos'd to run thro' each *Degree* of *Declination*, or *Latitude*, are call'd *Parallels of Declination*, or *Latitude*.

The *Equinoctial*, or *Equator*, is supposed to be Divided into 360 Equal Parts, or *Degrees* : But a *Natural Day*, is Measur'd by the *Revolution* of the *Equinoctial* ; and is ended, when the same Point of the *Equinoctial* comes again to the same *Meridian*, that is, in 24 *Hours* :

Therefore each Hour must be  $\frac{360}{24}$ , or 15 *Degr.*

Of the *Equator* :

Of *Time* :

$\frac{360}{24}$ or 15 deg. 00 m.	is	01 Hour, 00 m.
01 deg. 00 m.	is	00 h. 04 m.
00 deg. 15 m.	is	00 h. 01 m.
00 deg. 01 m.	is	4 Seconds of Time.

**EYE** of the Anchor ; is the Hole wherein the Ring of the Anchor is put into the Shank.

**EYE** of the Strap ; is the Ring, or Round, which is left of the Strap, to which any Block is seiz'd.

## F

**FACK** ; is one Round of any any Rope, or Cable, quoil'd out of the way.

**FADDOM**, or *Fathom* ; a Measure containing 6 Feet, much us'd at Sea.

**FALL** ; is that part of the Rope of a Tackle, which is hal'd upon.

**FALL off** : When a Ship under Sail, keeps not so near the Wind, as she shou'd do ; she is said to *Fall off*.

**FALL not off** ! A Word of Command, from him that Con's the Ship ; signifying as much as, Keep the Ship near the Wind ! See *Con'd*.

**LAND-FALL**. See *Land*.

**FALLS** : A Ship that has Rifings in some part of her Decks, more than other, is said to have *Falls*.

**FALSE-KEELS**. See *Keel*.

**FALSE-SHEAT**. See *Sheats*.

**FALSE-STEM**. See *Stem*.

**FARTHEL** ; the same with *Furl* : Which see.

**FASHION-PIECES** ; are two Pieces of Timber arising from the *Stern-Post*, and describing the Breadth of the Ship, at the

Stern, and are the outermost Timbers thereof ; to which are fasten'd the Planks that reach to the *after-end* of the Ship.

**FATHOM** ; the same with *Faddom* : Which see.

**FAT** ; signifies the same with *Broad*. So a Ship is said to have a *Fat-Quarter*, if the *Trustring in*, or *Tuck* of her *Quarter* under-Water, be deep.

**FEATHER** ; *Cut a Feather* : Which see.

**FEAZING** ; signifies, the ravelling out of any Great-Rope, or Cable, at the End.

**FEND**, imports the same as *Defend*.

*Fending the Boat* ; is, saving it from being dash'd against the Rocks, Shore, or Ship's-side.

**FENDERS** ; are Pieces of old Hawfers, Cable-Ropes, or Billets of Wood, hung over the Ship's-sides, to keep other Ships from rubbing against her, and bruising her.

**FEND-BOLTS**. See *Bolts*.

**FETCH him up**, that is, to give Chase, or to Pursue a Ship, at Sea.

**FIDD** ; is an Iron or Wooden-Pin, to splice and fasten Ropes together : 'Tis made Taper-wise, and sharp at one end. And that Pin in the Heel of the *Top-mast*, which bears upon the *Chesse-trees*, is call'd also, a *Fidd*.

**FIDD-Hammer** ; is that whose Handle is a *Fidd*, or made Taper-wise.



**FIGHTING-Sails.** See *Sails*.

**FIGHTS** ; are the Waste-Cloths which hang round about a Ship, in a Fight, to secure the Men from being seen by the Enemy.

**CLOSE-FIGHTS** ; are the Bulk-heads, *fore* and *ast* the Ship ; put up, for the Men to stand secure behind, and Fire on the Enemy, and Scoure the Decks, in case of Boarding.

**RUNNING-FIGHTS** ; are those *Sea-Fights* where the Enemy do not stand the Battle, but are continually Chased. Of

these *Sea-Fights*, we might give several Instances ; and particularly, that off *Cape-Barfleur*, between the *English* Fleet, under Admiral *Russel*, (now Earl of *Orford* ; and the *French* Fleet, under Monsieur *Tourville* : The Fight began on the 19th of *May*, 1692. about Half-an-Hour after Eleven in the Morning ; And Monsieur (in the *Royal Sun*) stood it for about an Hour and an half ; and then Tow'd off, and so made a *Running-Fight* of it : But being Chased for some Days, was forced to Run a-shore at *Cherbrooke* ; where He (of 110 Guns, ) and Two more, of 104 Guns each, were Burnt ; as also Thirteen at *La-Hogue*, by Sir *George Rooke*, (then *Vice-Admiral* of the *Blue*,) viz. one of 90, two of 80, four of 76, four of 60, and two of 56 Guns

**FIRE-SHIPS** ; are Vessels Charg'd with Artificial Fire-

works ; who having the Wind of an Enemy's Ship, Grapples her, and sets her a-Fire.

**FISH** ; is a Plank, or Piece of Timber, fasten'd to a Ship's Mast, or Yard, to strengthen it.

*To Fish a Mast, or Yard* ; is, to fasten Planks, or Pieces of Timber, to it ; which is done, by nailing them on with Iron-Spikes ; and *Would* them, that is, winding Ropes hard about them.

**FISH-BLOCK.** See *Block*.

**FLAGS** ; are the *Colours* that the *Admirals* of a Fleet carry on their *Tops* ; and are Marks of Distinction, as well of *Officers*, as *Nations*. The *Admiral* in *Chief*, carries it on his *Main-Top* ; the *Vice-Admiral*, on the *Fore-Top* ; and the *Rear-Admiral* his, on the *Mizen-Top*. When a *Council of War* is to be held at Sea ; if it be on-board the *Admiral*, they hang a *Flag* in the *Main-Shrowds* ; if in the *Vice-Admiral*, in the *Fore-Shrowds* ; if in the *Rear-Admiral*, in the *Mizen-Shrowds*.

**FLAG-OFFICERS** ; those who Command the several *Squadrons* of a *Fleet*, such are, the *Admirals*, *Vice-Admirals*, and *Rear-Admirals*.

*To Lower, or Strike the Flag* ; that is, to Take in the *Flag*, or Pull it down upon the *Cap* ; is a Respect due from all Ships, or Fleets inferior, whether in respect of Right of Sovereignty,

Place, or the like; expressing an Acknowledgment, and Submission, when they meet with others, any way justly their Superiors: And in the Case of *Sovereignty*, in our *Narrow Seas*, which has bin long claim'd; and made good by the Kings of *England*: So that if any Ship whatsoever, shall in any of those Parts, meet with any *Admiral of England*, and do not acknowledge this *Sovereignty*; by *Taking in her Flags*; she may, and is to be treated as an *Enemy*. And, in a Fight, to *Lower*, or *Strike the Flag*, is a *Token of Yielding*.

To *Heave out the Flag*; that is, to *Put out*, or *Put abroad the Flag*.

The *FLAGS of all States and Nations, according to the best Accounts, are as follow: The Names of Places, being in an Alphabetical Order.*

*FLAG of Algier, in Barbary; is Red, and Hexagonally cut, charg'd with a Turk's-Head and Turban.*

*FLAG of Amsterstam, in Holland; consists of Three Bands, or Cloths; the Uppermost Red, the Lowermost Black, and the Middlemost White; which has therein the Arms of Amsterdam: Bearing Gules, a Pale Sable, charg'd with three Saltiers, (or St. Andrew's-Cross) Argent, with an Imperial Crown for a Crest, and supported by two Lions Sable.*

*FLAG of Bergen, in Norway;*

*is Red, travers'd with a Cross Argent, charg'd in the Middle with a Scutcheon, bearing Argent, a Lyon Gules, holding a Sword Azure, with a Hilt Sable in the Right-Paw, and surrounded with a Garland of two Green Branches.*

*FLAG of Bremen, in Lower-Saxony; consists of Nine Bands, viz. Five Red, and Four White; charg'd, near the Flag-staff, with a Pale Checker'd Argent and Gules.*

*FLAG of Brandenburg; is White, charg'd with an Eagle Gules, holding a Sword Azure, with a Hilt Sable, in the Right-Tallon; and a Scepter Or, in the Left.*

Another *FLAG of Brandenburg; consists of seven Bands, four White, and three Black; charg'd with a Scutcheon, bearing Argent, an Eagle Gules.*

*FLAG of Burgundy; is White, travers'd with a Saltier, (or St. Andrew's-Cross,) of two Ragged-Staffs Gules.*

Another *FLAG of Burgundy; is Blue, charg'd with the same Cross.*

*FLAG of Calais, in France; is Blue, charg'd, in the middle, with a Cross Argent.*

*FLAG of China. The Emperor of China maintains several entire Fleets, for to secure his Trade, and Navigation; And is said, by some, to bear for Ensigns Armorial, and Flags, Argent, charg'd with three Black-moors-Heads, placed in the front their Bust Vested Gules: But, according*



according to others, two Dragons *Sable*.

FLAG of *Courland*; is *Red*, charg'd with a Crab-Fish *Sable*.

Another FLAG of *Courland*; consists of two Bands, the uppermost *Red*, and the lowermost *White*.

FLAG of *Dantzic*, in *Prussia*; is *Red*, charg'd, near the Flag-staff, with two Crosses *Argent*, one above the other, and over them a Crown *Argent*.

Another FLAG of *Dantzic*; is *Red*, with four Crosses *Argent*, two and two; and Crowns *Argent*.

FLAG of *Denmark*; is *Red*, but slit and travers'd with a *White* Cross. And the

FLAGS of *Danish* Merchant-Ships, are *Square*.

FLAG of *Dunkirk*, in *Flanders*; consists of six Bands intermingled, three *Blue*, and three *White* one's.

FLAG of *Elbing*, in *Prussia*; consists of two Bands, the uppermost *White*, with a Cross *Gules*; the lowermost *Red*, with a Cross *Argent*.

FLAG of *Emden*, in *Westphalia*; consists of three Bands, which are *Yellow*, *Red*, and *Blue*.

FLAG-Royal, or Standard-Royal of *England*; ought to be *Yellow* (viz. *Or*,) according to some; But others will have it, *White* (or *Argent*;) 'Tis charg'd with a Quarter'd Scutcheon of *England*, *Scotland*, *France*, and *Ireland*. 'Tis never carry'd but by the Sovereign Prince, or

his High-Admiral, or Commission.

Another FLAG-Royal of *England*; is Quarterly: The First and Fourth Quarter Counter-quarter'd; In which the first and fourth *Azure*, Three *Flower-de-Luces Or*; The Royal Arms of *France*, Quarter'd with the Imperial Ensigns of *England*, which are in the Second and Third *Gules*, Three *Lions Passant Gardant in Pale Or*. In the Second Place, within a double Tressure Counter-Flower-de-Luce *Or*, a *Lion Rampant Gules*, for the Royal Arms of *Scotland*. In the Third place, *Azure*, an *Irish-Harp Or*, String'd *Argent*, for the Royal-Ensigns of *Ireland*. But sometimes 'tis altered; as in setting the *English* Arms before the *French*, and the like.

UNION-FLAG of *England*; is *Gules*, charg'd with these words FOR THE PROTESTANT RELIGION, AND FOR THE LIBERTY OF ENGLAND.

FLAG of the Admiral or *England*; is *Red*, charg'd with an Anchor *Argent*, set in *Pale*, entangled in, and wound about with a Cable of the same.

JACK-FLAG of *England*; is *Blue*, charg'd with a Saltier *Argent*, and a Cross *Gules*, border'd *Argent*.

FLAG of an *English* Merchant-Ship; is *Red*, and a Franc-quarter *Argent*, charg'd with a Cross *Gules*.

FLAG of *Flanders*; consists of Three Bands, the Uppermost

*Red*, the Lowermost *Yellow*, and the Middlemost *White*; which is charg'd with a *Saltier*, (or *Saint Andrew's Cross*) of two Ragged-Staffs *Purple*.

**JACK-FLAG** of *Flanders*; is *Yellow*, charg'd with a *Lion* in an *Orl Sable*, set in a *Scutcheon* fortify'd with Eight *Flower-de-Luce*; and adorn'd above with Three *Flower-de-Luce*, *Sable*.

**JACK-FLAG** of *Flushing*, in *Zeland*; is *Red*, charg'd with an *Urn* Crown'd *Argent*.

**FLAG-Royal** of *France*; is *White*, semè with *Flower-de-Luce Or*; and charg'd with the *Arms of France*: Which bears *Azure*, three *Flower-de-Luce Or*, two in *Chief*, and one in *Base*; The *Scutcheon* is environ'd with the *Collars* of the *Order of St. Michael* and the *Holy Ghost*: For *Crest*, an *Helmet* entirely open, whereon a *Crown* clos'd, after the manner of an *Imperial Crown*, with Eight inarched *Rays*, top'd with a *Double Flower-de-Luce*: The *Supporters* are, two *Angels* habited as *Levites*.

**FLAG of the Admiral of France**: Where the *Admiral of France* is a-board in *Person*, a *White Flag* is set upon the *Main-top-mast-head*.

**FLAG-Royal**, or *Standard-Royal* of the *French Gallies*; is *Red*, set with *Flower-de-Luce Or*.

**FLAGS** of the *French Merchant-Ships*; Their *Ensigns*, sometimes are *Blue*, travers'd with a *White Cross*, and the *King's-*

*Arms*-upon the *Whole*: Or any other *Distinction* as shall be thought proper; provided their *Ensigns* be not all *White*.

**FLAG** of *Genoa*; is *White*, travers'd with a *Cross Gules*.

**FLAG** of *Hamburg*, in *Lower-Saxony*; is *Red*, charg'd with a large *Tower Argent*, and three *Turrets* the same, at the *Top*.

Another **FLAG** of *Hamburg*; is *Red*, charg'd with three *Towers Argent*, placed one and two, at equal distance.

**FLAG** of *Holland*; consists of Three *Bands*; The *First Orange*, the *Second White*, and the *Third Blue*.

Another **FLAG** of *Holland*, has twice as many *Bands* as the former; that is, two of each *Colour*.

Another **FLAG** of *Holland*, has *Nine Bands*; that is, thrice as many as the first, and three of each *Colour*.

**JACK-FLAG** of *Holland*, is like that of the *States General*, but without a *Scutcheon*.

**FLAG** of *Hoorn*, in *Holland*; consists of Three *Bands*, the *Uppermost* and *Lowermost Red*, the *Middle White*; whereon is placed a *Horn Gules*, garnish'd with *Hoops Or*, and hung by a *String Gules*.

**FLAG** of *Japan*; is said to be *Sable*, with three *Trefoils Argent*.

Another **FLAG** of *Japan*, bearing *Or*; six *Stars Argent*, in an *Oval Shield*, border'd with little *Points of Gold*.



FLAG of *Ireland*; is *White*, charg'd with *St. Andrew's Cross*.

FLAG of *Legorn*, in *Tuscany*; is *White*, charg'd with a *Cross Gules*.

FLAG of *Lubec*, in *Lower-Saxony*; consists of *Two Bands*, the *Uppermost White*, and the *Lowermost Red*.

FLAG of *Malta*; is *White*, charg'd with the *Cross of Malta*, that is, a *Cross with Eight Points Red*.

Another FLAG of *Malta*, is *Red*, travers'd with a *Cross Argent*.

FLAG of *Middleburg*, in *Zeland*; consists of *Three Bands*, which are, *Red, White, and Yellow*.

Another FLAG of *Middleburg*; is *Red*, charg'd with a *Tower Embattl'd Or*.

FLAG of the *Great Mogul*; is said to be *Argent*, *Semè* with *Be-fants, Or*.

FLAG of *Muscovy*; consists of *Three Bands*, the *Uppermost White*, the *Lowermost Red*, and the *Middlemost Blue*; which is charg'd with an *Eagle display'd Or*; bearing on its *Breast* a *Shield Or*; charg'd with a *Cavalier Argent* fighting a *Dragon*: with a *Royal Crown* over the *Heads*.

Another FLAG of *Muscovy*; consists of *Three Bands*, of the *same Colour* with the former; travers'd with a *Saltier* (or *St. Andrew's Cross*) *Azure*.

Another FLAG of *Muscovy*; is *Quarter'd* by a *Cross Azure*: the *First* and *Fourth Quarter Ar-*

*gent*; the *Second* and *Third Gules*.

FLAG of *Naerden*, in *Holland*; is *Blue*, charg'd with *three Stars Or*.

FLAG of *Nanquin*, in *China*: The *Junks* of *Nanquin*, carry on their *Main-top-mast-head* a *Red and White Flag*; and on the *Fore-top-mast*, a *Red Flag*: They carry also *Gray, Blue, Red, and White Ensigns*; as also, *two Purple Jacks*, with *Red, White, and Blue Pendants*.

FLAG of *Ostend*, in *Flanders*; consists of *two Cloths, or Bands*; the *Uppermost Red*, and the *Lowermost Yellow*.

FLAG of *Poland*; is *Red*, charg'd with an *Arm* coming out of a *Cloud Azure*, dress'd to the *Elbow* with *White Cloth*, and a *Ruffie Or*; holding in the *Hand* a *Naked Sword Argent*, and *Hilt Sable*.

FLAG of the *Pope*; is *White*, charg'd with the *Image* of *St. Peter*, and *St. Paul*: That of *St. Peter*, holding in his *Right-Hand* *two Keys* placed in *Saltier*, and a *Book* in his *Left-Hand*: That of *St. Paul*, holding a *Book* in his *Right*, and a *Sword* in his *Left-Hand*.

Their *Pendants* consist of *three Bands*, one *White*, one *Yellow*, and another *Red*.

FLAG of *Port-a-Port*, in *Portugal*; has *Eleven Bands*, viz. *Six Green*, and *Five White*.

FLAG of *Portugal*; is *White*, charg'd with the *Arms* of *Portugal*: Which bears *Argent*, *five*

Scutcheons *Azure*, placed cross-wise, each charg'd with as many *Besants* of the first placed in *Saltier* and pointed *Sable*: The Shield border'd *Gules*, charg'd with seven Towers *Or*; three in Chief, and two in each Flanch. The Crest is a Crown *Or*.

Another FLAG of *Portugal*; is *White*, charg'd with an Armillar Sphere *Or*, set on the Globe of the World *Azure*, with an Horizon *Or*, and a *Purple* Cross above.

Another FLAG of *Portugal*, is *White*, charg'd with a *Purple* Armillar Sphere, with a Cross *Gules* on each side, and one of the same above: And placed upon a Globe of the World *Azure*, with an Horizon *Or*.

Another FLAG of *Portugal*; is *White*, charg'd, towards the *Flag-staff*, with the Arms of *Portugal*; and in the middle, with a *Purple* Armillar Sphere, set on the Globe of the World *Azure*, with an Horizon *Or*; and above, a Cross *Gules*, sustain'd by a Pillar *Or*: And towards the end, is placed a Monk dress'd in *Black*, with a Cross *Gules* in the Right-Hand, and a Chaplet of Beads in the Left.

Those *Portugueeze* Ships, that go to their *Indies*, carries one of the three last *Flags*.

FLAG of *Ragusa*, in *Dalmatia*; is *White*, charg'd with a *Scutcheon*, with this word, LIBERTAS.

FLAG of *Revel*, in *Livonia*; consists of six Bands, that is, three *White*, and three *Blue* ones.

FLAG of *Rostoc* in *Lower-Saxony*; consists of three Bands, the highest *Blue*, the middle *White*, the lowermost *Red*.

FLAG of *Savoy*; is *Red*, Quarter'd by a Cross *Argent*, within which, these four Letters, *F. E. R. T.* are placed, one in each, signifying, *Fortitudo Ejus Rhodum Tenuit*.

Another FLAG of *Savoy*; is *White*, charg'd with the Image of the *Nostre-dame*.

FLAG of *Schelling*, and *Fly*, in *West-Friezland*; consists of Ten Bands, or Cloths, which are, beginning from the uppermost, *Red, White, Blue; Red, Blue, Tellow; Green, Red, White, and Blue*.

FLAG of *Scotland*; is *Blue*, with a Franc-quarter *Argent*, charg'd with a Cross *Gules*.

Another FLAG of *Scotland*; is *Red*, with a Franc-quarter *Azure*, charg'd with a *Saltier*, (or *St. Andrew's-Cross*.)

FLAG of *Sicily*; is *White*, charg'd with an Eagle *Sable*.

FLAG of *Spain*; is *White*, charg'd with the Coat of Arms of *Spain*: Which is Quarterly; The first Quarter Counter-quarter'd: In the First and Fourth *Gules*, a Castle Tripple-Tower'd *Azure*, (for *Castile*.) In the Second and Third *Argent*, a Lion Passant *Gules*, Crown'd, Langued, and Arm'd *Or*, (for *Leon*.) In the Second great Quarter *Or*, four Pallets *Gules*, (for *Arragon*;) Party *Or*, four Pallets also *Gules*, betwixt two Flanches



Flanches *Argent*, charg'd with as many *Eagles Sable*, Member'd, Beak'd, and Crown'd *Azure*, (for *Sicily*.) These two great Quarters grafted in Base *Argent*, a *Pomegranate Verte*, Stalk'd, Leav'd of the same, Open'd, and Seeded *Gules*, (for *Granada*.) Over all *Argent*, five Scutcheons *Azure*, placed cross-wisè, each charg'd with as many *Besants* in *Saltier*, of the first (for *Portugal*.) The Shield border'd *Gules*, with seven Towers *Or*, (for *Algarve*.) In the Third Quarter, *Gules*, a *Fesse Argent*, (for *Austria*.) Couple and supported by Ancient *Burgundy*, which is Bandy of six Pieces *Or* and *Azure*, border'd *Gules*. In the Fourth Great Quarter, *Azure*, *Semè* of *Flower-de-Luce*, *Or*; with a Border *Compony Argent* and *Gules*, (for Modern *Burgundy*;) Couple *Or*, supported *Sable*, a *Lion Or*, (for *Brabant*.) These two great Quarters charg'd with a Scutcheon *Or*, a *Lion Sable*, and *Langued Gules*, (for *Flanders*.) Party *Or*, an *Eagle Sable*, (for *Antwerp*.) For Crest, a *Crown Or*, rais'd with Eight *Diadems*, or *Semi-circles*, terminating in a *Mond Or*. The Collar of the *Golden-Fleece* encompasses the Shield; on the sides of which is placed the two *Pillars of Hercules*, one on each side, with this Motto, P L U S U L T R A.

Another FLAG of *Spain*; is *White*, charg'd with a Scutcheon Quarter'd; the first and fourth

*Gules*, a *Castle Tripple-Tower'd Azure*: The second and third *Argent*, a *Lion Passant, Gules*, Crown'd, *Langued*, and *Arm'd Or*.

FLAG of *Stetin*, in *Upper-Saxony*; consists of two Bands, the uppermost *White*, charg'd with a *Billet*, (that is, the Form of a Letter folded up) *Gules*; and the lowermost *Red*, charg'd with a *Billet Argent*.

FLAG of *Stralsund*, in *Pomerania*; is *Red*, charg'd with a *Sun Or*.

FLAG of *Sweden*; is *Blue*, slit, and travers'd with a *Cross Or*.

FLAG of the *Turk*; is *Verte*, charg'd with three *Crescents* (or *Half-Moons*) *Argent*, with their Points inward.

*Or*, according to some, 'tis *Red*, charg'd with three *Crescents Argent*: And sometimes only one; and Crested with a *Turban*, charg'd with three *Black Plumes* of *Heron's Quills*, with this Motto, DONEC TOTUM IMPLEAT ORBEM.

And this is never carried but by the *Grand-Sinior* himself, or by his *Commission*.

Another *Turkish* FLAG; is *Blue*, charg'd with three *Crescents Argent*, with their Point outwards.

Another *Turkish* FLAG; is *Red*, charg'd with three *Crescents Argent*, in the same Order with the last.

The *Turks* have several other *Flags*, differently distinguish'd; but their Colours are always *Red*,

*White*, or *Green* : And are oftentimes charg'd with various Black Letters.

FLAG of the *Turkey Gallies* ; is *Red*, and cut sharp towards the End.

FLAG of *Tuscany* ; is *White*, charg'd with the Arms of the *Grand-Duke* ; Who bears *Or*, five Roundles *Gules*, two, two, and one, and one in Chief *Azure*, charg'd with three Flower-de-Luce *Or*.

Another FLAG of *Tuscany* ; is *White*, charg'd with the Cross of *St. Anthony*, *Gules*, with a Border *Or*.

FLAG of *Venice* ; is *Red*, charg'd with a Lion Wing'd, Sejant *Or*, holding a Cross *Or* in his Right-Paw ; and a Book open, under his Left-Paw, with these words written, PAX TIBI, MARCE EVANGELISTA MEUS.

Another FLAG of *Venice* ; like the former, only the Lion holds in his Right-Paw a Sword *Azure*, with a Hilt *Sable*.

Another FLAG of *Venice* ; is *White*, charg'd with the same Lion.

FLAG of the *States General of the United Provinces* ; is *Red*, charg'd with a Lion *Or*, holding with one Paw a Cutlass *Argent* ; and in the other, a Bundle of Seven Arrows *Or* closely bound together, with Heads and Feathers *Azure*.

JACK-FLAG of the *States General* ; consists of Slips and Pieces, *Orange* and *Blue*, with a

Cross *Argent* ; and charg'd in the middle with a Scutcheon bearing *Gules*, with a Lion as before.

Another FLAG of the *United Provinces*, charg'd with thrice the Letter *P*. signifying, *Pugno Pro Patria*.

FLAG of *Zeland* ; consists of three Bands, one *Orange*, one *White*, and the other *Blue* ; on the middlemost, or *White* one, is plac'd the Arms of *Zeland* : Which is, Chief *Or*, a Lion *Gules*, rising out of three Waves *Azure*, in a Field *Argent*.

FLAIR : When a Ship is somewhat *hous'd in*, near the Water, and above that the Works hangs over too much, and therefore is laid out broader than due Proportion allowes, then 'tis said, *the Work do's Flair over* : And this makes the Ship more Roomy aloft, for the Men to use their Arms in.

FLAT in the *Fore-Sail* ; that is, hale in the *Fore-Sail* by the Sheat, as near the Ship's Side as possible : This is done, when a Ship will not fall off from the Wind.

FLAW ; signifies, a sudden Gust of Wind.

FLIE ; the same with *Fly* ; Which see.

FLOOD ; amongst Seamen, is when the *Tide* begins to come up, or the Water to Rise ; then they call it *Young-Flood* ; the next, *Quarter-Flood*, *Half-Flood*, and *Full-Sea High*-(or *Still*)-*Water*.



FLOOK. See *Fluke*.

FLOOR, in a *Ship*; is so much of her Bottom, as she rests upon, when she lies upon the Ground.

FLOOR-TIMBER. See *Timber*.

FLOTA; a Name given by the *Spaniards* to the *Plate-Fleet*, which they send Yearly to some part of their *West-Indies*.

FLOTSON; signifies the Goods lost by Shipwreck, which lie floating upon the Water; and are given to the *Lord-Admiral*, by his Letters Patent.

FLOWN-SHEATS: A Ship is said to sail with *Flown-Sheats*, when her Sails are not haled Home, or close to the Blocks.

*The Sheats are Flown*; that is, they are let loose, or to run as far as they will.

FLUKE, or *Flook*, of an *Anchor*; is that part of it which falls in the Ground. See *Anchor*.

FLUSH-DECK. See *Deck*.

FLUX of the *Sea*; that is, the Tide of *Flood*, See *Tide*.

FLY; is that part of the *Mariners-Compass*, on which the 32 *Winds* are drawn, and to which the *Needle* is fasten'd underneath. See *Compass*.

FLY-BOAT; is a great Vessel with a Broad *Bow*; some of which carry Seven or Eight hundred Tun weight of Goods.

*Let Flye the Sheats!* is a Word of Command, in case of a Gust of Wind, lest the Ship should

Over-set, or spend her *Top-Sails* and *Masts*, to have the *Sheat go a-main*, and then the Sail will hold no Wind.

FOOT-HOOKS. See *Futtocks*.

FORBEAR! is a Word of Command, in a *Ship's-Boat*, to hold still any Oar, either on the Broad, or Whole Side.

FORE-CASTLE of a *Ship*; is that part where the *Fore-Mast* stands: 'Tis divided from the rest by a Bulk-head.

FORE-FOOT; signifies one Ship's lying or sailing cross another's Way: As if two Ships being under Sail in *Ken* one of another, one of them lying in her Course, with her Stem so much *a weather* the other, that holding on their several Ways, neither of them altering their Courses, the Wind-ward Ship will run a-head of the other; then 'tis said, such a Ship lies with the other's *Fore-Foot*: But as soon as she has pass'd her a-head, 'tis not said, she pass'd by her *Fore-Foot*; but, that she is gone out a-head.

FORE-JEER-BITS. See *Bits*.

FORE-LOCKS, or *Fore-lock-Keys*; are small flat Pieces of Iron, made Wedge-like, to be put into the Ends of *Bolts*, to keep down the *Cap-Squares* of of the *Carriages of Guns*.

FORE-LOCK-BOLTS. See *Bolts*.

FORE-KNIGHTS. See *Kights*.

FORE-MAST of a *Ship*; is a large round Piece of Timber placed in her Fore-part, or *Fore-Castle*,

*Castle*, and carrying the *Fore-Sail*, and *Fore-Top-Sail Yards*: Its Length is usually  $\frac{8}{9}$  of the *Main-Mast*. And the *Fore top-Gallant-Mast* is  $\frac{1}{2}$  the Length of the *Fore-Top-Mast*.

**FORE-MAST-MEN**; are those on-board that take in the *Top-Sails*, Sling the *Yards*, Furl the *Sails*, *Bowse*, *Trice*, and take their Turn at the *Helm*, &c.

**FORE-RAKE**. See *Rake*.

**FORE-REACH**: One Ship is said to *Fore-Reach* upon another, when, both sailing together, one sails better, or out-goes the other.

**FORE-STAFF**, or *Cross-Staff*; is an Instrument used at Sea, for taking the Height of the *Sun*, *Moon*, or *Stars*, with one's Face towards the Object.

**FORMER**; is a Piece of Wood, Turn'd round, and fitted to the Bore of a Piece of Ordnance; on which are made the *Cartridges*, which are the due Charge of Powder for the Gun.

**FOUL-SHIP**; is that which has bin long Untrimm'd, so that *Grass*, *Weeds*, *Perwinckles*, or *Barnacles*, stick or grow to her Side under Water.

*The Rope is Foul*; that is, the Rope is entangled in it self, or hindred by another, so that it cannot run, or be haled.

*The Anchor is Foul*; that is, the *Cable* is got about the *Flock*.

*The Ship makes Foul Water*;

that is, when under *Sail*, she comes into such *Shole-Water*, as to raise the *Sand* and *Ooze* with her Way; and tho' she don't touch the *Ground*, yet she comes so near it, that the Motion of of the Water under her, raises the *Mud* from the *Bottom*, and so *Puddleth* or *Fouleth* the Water: Nor can the Ship then feel her *Helm*, as well as in *Deep Waters*.

*To be Foul on each other*; that is, when Ships come so close as to intangle their *Riggings*, and endamage each other.

**FOUNDER**: A Ship is said to *Founder*, when by an extraordinary *Leak*, or by a great *Sea* breaking in upon her, she is so fill'd with Water, that she cannot be freed of it; so that she'll neither *Veer*, nor *Steer*, but will lie like a *Log*; and not being able to swim long, at last will sink.

**FRAIGHT** of a *Ship*; that is her *Burthen*, or the Quantity of Goods she can carry,

**FREE**: The *Pump* is said to *Free the Ship*, when it throws out more Water than Leaks into her: But when it cannot throw out the Water as fast as it Leaks in, 'tis said, *The Pump can't Free her*.

*Free the Boat*; that is, *Bailing* or *Lading* out the Water therein.

**FRESH-SHOT**; signifies the Falling down of a great *River* into the *Sea*, so that there is *Fresh-Water* found in the *Sea* a good way from the Mouth of the *River*:



River: And som times this happens by a Descent of Lind-Waters on a sudden; and as this is more or less, so 'tis call'd *Great or Small Fresh-Shot*.

FRES I the *Hawse*. See *Hawse*.

FRIGAT; is a Ship of War, light Built, and a good Sailer: They commonly have Two Decks.

*Light-Frigat*; is a Small Vessel of War, a good Sailer, with only One Deck.

FRIGATTON; is a *Venetian* Vessel, common in the *Adriatic-Sea*, with a Square Stern, and carrying only a Main, and Misen-Mast, and a Bow-Sprit.

FURLE, (*Bind, or Make up,*) as to *Furle the Sail*; that is, to wrap up, and bind it close to the Yard: Which is perform'd, by hilling up the Braces then wrapping up the Sail close together, and so binding it fast to the Yard with the *Caskets* and *Furlin-Lines*.

FURLING-LINES; are small Lines made fast to the Top-sail, Top Gallant-sail, and the Misen-Yard Arms to *Furl* up the Sails by.

FURRING of a Ship; is laying double Planks on her Sides, after she is built, as Occasion requires: Or when a Ship's Planks are ript off, other Timbers are put upon the former Timbers, and on them other Planks; and this is done, that the Ship may bear the better Sail.

FUTTOCKS in a Ship, are

Timbers rais'd over the Keel, or the Compassing Timbers which make her Breadth.

*Ground-Futtocks*, are those next the Keel: The other are are call'd the *Upper-Futtocks*.

## G

G A G E: *The Ship's Gage*, is so many Feet as she sinks in the Water, or so many Feet of Water as she *Draws*: Which Seamen find thus; By driving a Nail into a Pike, near the End; then put down this Pike by the Rudder, till the Nail can hold under it: For then, as many Feet as the Pike is under Water, is the *Ship's Gage* required.

*Weather-Gage*: When one Ship has the *Wind* or is to *Windward* of another, she is said to have the *Weather-Gage* of her.

GALE, at *Sea*; signifies the Blowing of the Wind.

*A Brick, Stiff, or Strong Gale*; that is, when it blows very hard, or is to much Wind as the Top-sails can just endure to bear.

*Fresh Gale*, is a Wind that blows very Brisk; and is properly that which blows presently after a *Calm*, or when it begins to quicken.

*Loose-Gale*; is when the Wind blows not so hard, but that the Ship can carry her Top-sails *a-Trip*, (that is, hois'd up to the highest.) And the best Sailing of any, is in a *Fir Loom-Gale*; for then the

the Ship can bear all her Sails, and does not run so high.

*To Gale away* : When two Ships are near one another at Sea, and there being but little Wind blowing, one of them finds more of it than the other ; then they say, *The Ship Gales away from the other*.

GALEASS, is a heavy, low-built Vessel, using Sails, and Oars ; and carrying Three *Masts*, which cannot be lower'd, as in a *Galley*, viz. a Main-Mast, Fore-Mast, and Mizen-Mast : They have Thirty two Seats for Rowers, and Six or Seven Slaves to each : They also have Three Tire of Guns at the Head ; the Lowermost has Two Pieces, of 36 Poundsers each ; the Second, Two Pieces, of 24 Poundsers each ; and the Third, Two other Pieces, of 10 Poundsers each : At the Stern there are Two Tire of Guns, each of Three Pieces, and each Piece 18 Poundsers.

GALEONS, or *Galions* ; so the *French* formerly call'd their Great Ships of War ; but now 'tis a word in Use only among the *Spaniards* and *Italians* : Tho', properly, the *Spaniards* call only those Vessels *Galeons* ( whether Great or Small ) that are Yearly sent to *Vera-Cruz*, in *New-Spain* ; and if employ'd to any other Part, they are not call'd by that Name.

GALLERIES in a *Ship*, are, as it were, Balconies made on the Stern, without Board, with

with Passages into them from within : They are more for Ornament, and the Commanders Conveniency, than for any real Use : And indeed, in Ships of War, all Open *Galleries* have the Inconveniency of facilitating the Boarding of the Ship that way.

GALLERY-LADDER. See *Ladder*.

GALLEY, is a Low-built Vessel, using both Sails and Oars : They commonly carry Two *Masts*, viz. a Main-Mast, and a Fore-Mast ; which may be Struck, or Lower'd, at Pleasure : Their Length is generally about 130 Feet ; and Breadth, at the middle, about 18 Feet.

GALLIOT, is a little *Gally*, or a sort of *Brigantine*, built very slight, and fit to Chase ; carrying but One *Mast*, and Two or Three *Pattereroes* ; it can both Sail and Row, and has Sixteen or Twenty Seats for the Rowers, with One Man to each Oar : All the Seamen on-board are Soldiers ; and each has a Musket ready by him, upon quitting his Oar.

GANG, or *Crew* : The Company wherewith a Ship's Boat is Mann'd, is call'd that *Coxswain's Gang*, or *Crew*, who has the Charge of the Boat ; as the *Barge's Gang* or *Crew*, &c.

GANG-WAY ; is the several Passages, or Ways, from one part of the Ship to the other ; and whatsoever is laid in any of those Passage, is said to lie in the *Gang-Way*.

GAR-



**GARBOARD-Plank**, is the Plank next the *Keel* on the Outside.

**GARBOARD-Strake**, is the first Seam in a Ship, next the *Keel*.

**GARLAND**, in a Ship, is a Collar of Ropes wound about the Head of the Main-Mast, to keep the Shrouds from galling or fretting.

**GARNET**, is a Tackle having a Pennant coming from the Head of the Main-Mast, with a Block strongly seiz'd to the Main-Stay, over the Hatch-way, wherein is reev'd a *Runner*, with a Hook at one End, in which is hitch'd the Slings; and at the other End is a Double-Block, wherein the Fall of the Runner is reev'd: So that by it, any Casks, or Goods, that are not over-heavy, may be haled and hois'd into, or out of the Ship. When this *Garnet* is not used, 'tis fasten'd along by the Stay, at the Bottom of it.

*Clew-Garnet.* See *Clew*.

**GATE of the Sea**, or *Sea-Gate*. When two Ships are aboard one another, by means of a Wave, or Billow; then 'tis usual to say, That they lie aboard one another in a *Sea-Gate*.

**To GATHER**: At *Sea*, 'tis common to say, *We Gather on him*; that is, *We get the Wind of him*.

**GEAR**, as, *About your Gear!* that is, *Work on all hands!*

**GIFT-ROPE**. See *Rope*.

**GIRDING-GIRT**: A Ship is

*Girt*, or has a *Girding-Girt*, when the *Cable* is so taught, or strain'd, that upon the Turning of the Tide, the Ship cannot go over it with her Stern-Post, but must lie a-ross the Tide-Way.

**GOARING**: When a Sail is cut sloping, by degrees, and is broader at the *Clew*, than at the *Earing*, 'tis said to be cut *Goaring*; as all *Top*, and *Top Gallant-Sails*, are.

**GOOSE-WING**. Sometimes when a Ship sails before the Wind, or with a Quarter-Wind, and in a Fresh-Gale, the *Misen-Yard* is unparel'd and launch'd with the Sail over the *Lee-Quarter*, and *Guys* fitted at the further End, to keep the Yard steady; and a *Bom*, to boom out the *Misen-Sheet*: And this is done, to give the Ship the more Way; which otherwise, with these Winds, the *Misen-Sails* could not do; and the Sail thus fitted, is call'd a *Goose-Wing*.

**GRAPLINGS**, or *Grappels*. See *Anchor*.

**GRATINGS**, in a Ship, are small Ledges of saw'd Planks, fram'd one into the other, like the Lettice of a Prison-Grate, lying on the Upper-Deck, between the *Main-Mast* and *Fore-Mast*; serving for a Defence in *Close-Fights*, therefore are sometimes so called: They also serve for Coolness, Light, and other Conveniency. And at the Head of the Ship, where the Necessary-

House

House stands, there is another *Grating*.

**GRAVING** of a Ship, or, *To Grave a Ship*; is, to bring her to lie dry a-ground, then burn off all the old Filth that sticks to her Sides without board.

**GREAT-CIRCLE-Sailing**; is *Sailing* by, or upon a *Great-Circle* passing thorow the *Zeniths* of the two Places: Tho' this sort of *Sailing* is very exact, yet 'tis very difficult, and indeed, hardly possible for a Ship exactly to Sail by; but it may be of good Advantage, to keep conveniently near it, especially in a *Parallel* (or *East* and *West*) *Course*.

In *Great-Circle-Sailing*, there are Three Cases; *viz.*

*First*, When two Places differ only in *Latitude*.

*Secondly*, When they differ only in *Longitude*.

*Thirdly*, When they differ both in *Latitude* and *Longitude*.

**GRIPE** of a Ship, is the Compass or Sharpness of her *Stem* under Water, chiefly towards the Bottom of it; and she is so shap'd, that she may *Gripe* the more, or keep good Wind: Therefore a *False-Stem* is sometimes put upon the True one.

*The Ship Gripes*; that is, turns her Head to the Wind more than she should; and this is caused, either by *Over-loading* her ahead, the Weight of which presses her down, so that it will not readily fall off from the Wind;

or by *Staying* or *Setting* her *Masts* too much *ast*; which always will be a fault in short Ships, that Draws much Water, and will cause her to be continually running into the Wind: Tho' in *Floaty Ships*, if the *Masts* be not *Stay'd* very far *ast*, they will never keep a good Wind.

**GROMETS**, are small Rings, made fast by *Staples* to the upper side of the *Yard* of a Ship, to tie unto it, or to fasten the *Laskets*.

**GROUND-TACKLE**, signifies a Ship's *Anchor*, *Cables*, &c. in general; or whatever is necessary to make her ride safe at *Anchor*.

**GROUND-TIMBERS**, are those *Timbers* in the Ship which lie on her *Keel*, and are fasten'd to it with *Bolts*, thro' the *Keelson*; and are so call'd, because the Ship rests upon them when she is a-ground.

**GROUNDING** of a Ship, is bringing of her on *Ground*, to be *Clean'd*, *Trim'd*, *Scrubb'd*, or have a *Leak Stopt*.

**GUDGEONS**, are the *Eyes* drove into the *Stern-Post*, into which the *Pintles* of the *Rudder* go, to hang her on.

**GUEST-ROPE**. See *Rope*.

**GULF**, is a Part of the Ocean which runs up into the Land, through *Straits*, or *Narrow Passages*: As, the *Gulf of Venice*, or the *Adriatic-Sea*, in *Europe*; the *Gulf of Persia*, in *Asia*; the *Gulf of Arabia*, or the *Red-Sea*,  
in



in *Africa*; and the *Gulf of Florida*, in *America*.

**GUNNEL**, the same with *Gun-Waile*.

**GUNNER** of a *Ship*, or *Master-Gunner*, has the Charge of all the Ordnance the *Ship* carries; to see that they be serviceably Mounted, and sufficiently supply'd with Spunges, Ladles, and Rammers; that, in Foul-Weather, they be travers'd within Board, (especially those of the Lower-Tire,) and that the Ports be shut, and Caulk'd up; and that at all times they may be well Lash'd, and made fast, lest any one of them should chance to break loose, to the imminent Danger of Foundring the *Ship*: And in Time of an Engagement, he is to provide that every Piece be sufficiently Mann'd: He is to be Cautious and Provident in the Guard of the *Powder* in the *Powder-Room*, and upon no Occasion to suffer any Fire to come near it, unless it be a Candle in a well-glaz'd Lantern: He is to give an Account of all his Charge, upon Demand. He has a *Mate*, and *Quarter-Gunners*, for his Assistance.

**GUNNERS-TACKLE**. See *Tackle*.

**GUN ROOM**, is the Apartment under the *Great-Cabin*, which is the proper Place or Rendevous of the *Master-Gunner*, and his *Crew*; where they get their Carthrages ready, as also all other Necessaries belonging to them.

**GUNTER'S - SCALE**. See *Scale*.

**GUN - WAIL**, or *Wun-Waile* of a *Ship*; is the upmost *Wail* of a *Ship*, or that Piece of Timber which reaches on either Side from the Quarter-Deck to the Fore-Castle, being the uppermost *Bend* which finishes the upper-Works of the Hull in that part wherein they put the *Stanchions*, which support the *Wast-Trees*.

**GUY** is any Rope used to keep off things from bearing or falling against the *Ship's* Side, as they are hoisted in: So that if any thing is to be haled in over the *Gun-Waile*, it's gently eased in by a *Guy-Rope* made fast to the *Stanchions* of the *Wast-Trees*.

**GUY-ROPE**, is that *Rope* which is made fast to the Fore-Mast at one end, and is reev'd thro' a single Block seiz'd to the Pennant of the Winding-Tackle, and then again reev'd thro' another seiz'd to the Fore-Mast, and whose Use is to hale forward the Pennant of the Winding-Tackle.

## H

**H A I L E**: To Haile a *Ship*; that is, to Call to her, to know whence she is, and whether bound: The usual Call is, *Hæ! the Ship?* The other Answers, *Hæ!* &c. And to Salute another *Ship* with *Trumpeis*, and

and the like, is also call'd *Hailing*.

**HALE**, signifies *Full*: As, to *Hale up*, is to Pull up; to *Hale in*, or *out*, is to Pull in, or out.

To *Over-Hale a Rope*, is to *Hale* it too stiff, or *Hale* it the contrary way.

*Keel Hale*. See *Keel*.

**HALLIARD**, are those Ropes by which all Yards are hoisted up. The *Cro's-Jack*, and the *Sprit-sail-Tard* have no *Halliards*, because those are always Slung; tho' in Small Ships, they have *Halliards* to the *Sprit-sail-Yards*.

**HAMMOCK**; a Piece of Canvas hung up fast by the four Corners, between Decks, for the Seamen to sleep in.

**HAND**, or *Handing*. When a thing is to be Deliver'd away, or pass'd from one to another, or to be brought to any one; then the Word is, *Hand it this way*, or *that way!* Also, When more Men are wanted to do any Labour, as *Hoisting*, &c. they call for more *Hands*, not more Men.

**HAND-SPIKE**; is a Wooden-Leaver, with which we Traverse the *Ordnance* at Sea; or Heave withal in a *Windlass* to weigh up the *Anchor*.

**HARPINGS**; is properly the Breadth of the Ship at the *Bow*. Also the Ends of the *Bends* which are fasten'd into the *Stem*, are, by some, call'd *Harpings*.

**HATCHES** of a *Ship*, are like *Trap-Doors* in the *Midships*, or between the *Main-Mast* and *Fore-Mast*. This way, all Goods of *Bulk* are let down into the *Hold*.

**HATCH-WAY**, is that Place where the *Hatches* are: So that to lay a Thing in the *Hatch-way*, is to put it so, that the *Hatches* cannot be come at, or open'd.

*Coamings of the Hatches*: When the *Hatches* are rais'd up higher than the rest of the *Deck*, those Pieces of *Timber* or *Planks*, which raise, and bear them up, are call'd *Coamings of the Hatches*. See *Scuttle*.

**HAWSER**; is a great Rope, or a sort of a small Cable, serving for various Uses a-board a *Ship*; as, to fasten the *Main* and *Fore-Shrouds*; to *warp* a *Ship* by as she lies at *Anchor*, and wind her up to it by a *Capstan*, &c. And a Great *Ship's Hawser*, may serve for a Cable to the *Shear-Anchor* of a Small *Ship*.

**HAWSES**, are great Holes under the *Head* of the *Ship*, thro' which the *Cables* run, when she lies at *Anchor*.

*Bold-Hawse*; that is, when the Holes are high above the *Water*.

*Fresh the Hawse!* or, *Veer out more Cable!* is when part of the *Cable* that lies in the *Hawse* is fretted or chaf'd, and 'tis requir'd that more *Cable* may be *Veer'd out*, so that another part of it may rest in the *Hawse*.



*Fresh the Hawse!* that is, Lay new Pieces upon the Cable in the *Hawse*, to preserve it from fretting.

*Burning in the Hawse*; that is, when the Cable endures a violent Stress.

*Clearing the Hawse*: When two Cables that come thro' several *Hawses* are twisted and entangled one with the other, the Untwisting of them, is call'd *Clearing the Hawse*.

*Thwart the Hawse*, or *Rides upon the Hawse*; that is, when a Ship lies *thwart*, or *cross*, or with her Stern just before another Ship's *Hawse*.

HAWSE-FULL, *To Ride Hawse-full*. See *Ride*.

HEAD of a Ship, or Boat; that is, the Fore-part. *The Chase stands right a-Head*; that is, right before us.

HEAD-LAND. See *Land*.

HEAD-LINES, are the Ropes of all Sails which are next to the Yards, and by which the Sails are made fast to the Yards.

HEADS, *Rung-Heads*. See *Rung*.

HEAD-SAILS, are those which belong to the *Fore-mast* and *Boltsprit*; for 'tis they that govern the *Head* of the Ship, and do make it *fall off*, and keep out of the Wind: And these, in Quarter-Winds, are the chief Drawing-Sails.

HEAD-SEA, is when a great Billow, or Wave of the Sea, meets the Ship right *a-head*, as she sails in her Course.

HEAVE! That is, to throw away: As, *Heave it Over board!* that is, *Fling it Over-board!*

*Heaving at the Capstan*; that is, turning about the *Capstan*.

*Heave and Set*; that is, when a Ship being at Anchor, rises and falls, by the force of the Waves, then she is said to *Heave and Set*.

*Heaving a-Peek*. See *Peek*.

*Heave the Lead!* See *Lead*.

HEEL: If a Ship lean on one side, whether she be *a-ground*, or *a-float*; then 'tis said, *She Heels a-Starboard*, or *a-Port*; Or that she *Heels offward*, or to the *Shore*; that is, enclines more to one side than the other.

HEEL of the Mast; signifies that part of the Foot of any Mast which is par'd away slanting on the Aftward side thereof, in order that it may be *Stay'd aftward on*; The *Heels* of the Top-Masts are Squares.

HEIGHT of the Sun, or Star, is an Arc of a Vertical-Circle intercepted between the Sun, or Star, and the *Horizon*. The Knowledge of this, when taken at *Noon*, is of great Use in *Navigation*, in order for finding the *Latitude of the Place* the Ship is in, or *Distance of the Zenith* from the *Equator*.

*Meridial-Height*. See *Meridian*.

HELM, or *Tiller*, of a Ship; is that Piece of Timber which is fasten'd into the Rudder, and so comes forward into the *Steerage*, or Place where he at the *Helm*.

Steers the Ship, by holding the *Whipstaff* in his Hand. Some Ships have a Wheel, like those in *Cranes*, placed between the *Quarter-Deck* and *Coach*; which has several Advantages, to what the Common Methods have.

*Bear up the Helm!* that is, Let the Ship go more Large before the Wind.

*Helm a Mid-ship!* or, *Right the Helm!* that is, Keep it Even with the Middle of the Ship.

*Bear up Round!* that is, Let the Ship go directly before the Wind, in the middle, between her two Sheats.

*Port the Helm!* that is, Put the *Helm* over to the Left-side of the Ship!

*Starboard the Helm!* that is, Put it to the Right-side of the Ship.

*Ease the Helm!* See *Ease*.

**HEMISPHERE**; is the Half of a *Sphere*, or *Globe*, when 'tis supposed to be cut thro' the Centre, in the Plane of one of its great Circles.

Thus, the *Equator* divides the *Terrestrial Globe* into the *Northern* and *Southern Hemispheres*.

The *Meridian* divides the *Globe* into the *Eastern* and *Western Hemispheres*.

The *Horizon* divides the *Globe* into the *Upper* and *Lower Hemispheres*.

**HEMISPHERES**, are also, those *Maps* or *Draughts* of the *Heavens*, *Constellations*, &c. that are usually made for the Benefit of *Navigators*.

**HITCH**; is to catch hold of any thing with a *Hook*, or *Rope*, to hold it fast: As, *Hitch the Fish-Hook to the Fluke of the Anchor!* That is said, when they are about to Weigh the *Anchor*.

*Hitch the Tackles into the Rings of the Boat!* That is said, when the *Boat* is to be Hoised in.

**HOISE**; is to Hale up any thing into the Ship; or getting up a *Yard*, &c. As, *Hoise up the Yard!* *Hoise the Water in!* &c.

**HOLD**; is that part of a Ship between the *Keelson* and the *Lower-Deck*: Wherein, divided by *Bulk-Heads*, are the *Powder-Room*, *Bread-Room*, *Steward's-Room*, &c. And in a *Merchantman*, all the Goods, and Lading in general, are Stow'd in the *Hold*.

*To Stow the Hold*; is to take Goods into the *Hold*.

*Predy the Hold*. See *Predy*.

*To Rummidge the Hold*; is to Remove, or Clear, the Goods and Things therein.

**HOLD-OFF**: In Heaving in the *Cable* at the *Capstan*, if it be very stiff and great, or have lain long in a *Slimy* or *Oazy-Ground*; unless that part of it which 'tis heav'd in by, be hal'd away hard from the *Capstan*, the *Cable* will Surge, or slip back: Therefore, it must be haled away as fast as it comes in, that the *Cable* may keep close about the *Whelps*; and this Work is call'd; *Hold-ing-off*.



*He Holds his own*: That is, speaking of a Ship under Sail, He keeps his Course Right forward.

**HOOKS**; are those fork'd Timbers, in a Ship, which are plac'd directly upon her Keel, as well in her *Run*, as in her *Rake*.

**Foot-HOOKS**; the same with *Futtocks*: Which see.

**Boat-HOOK**; a *Hook* used to Fend-off the *Boat* from Bruising.

**Shear-HOOKS**; are *Hooks* like Sickles, fix'd in the Ends of the Yard-Arms, that if a Ship under Sail come to Board her, those *Shears* may cut her Shrowds, and so spoil her Tacklings: But because they are so subject to break their own Yards, and cut the Ropes that come from the Top sails, they are now very seldom used.

**Can-HOOKS**, being made fast to the End of a Rope, with a Noose, (like that which Brewers use to sling or carry their Barrels on,) and made Use of for Slings.

**Looff-HOOKS**, is a Tackle with two *Hooks*; one, to hitch into a Cringle of the *Main* or *Fore-Sail*, in the Bolt-Rope, at the Leetch of the Sail, by the Clew; and the other is to hitch into a Strap which is splic'd to the Chestree: Their Use is, to pull down the Sail, and succour the Tackles in a large Sail, and stff Gale, that all the Stress may not bear upon the Tack. It is also used, when the Tack is to be seiz'd more secure: And to take off,

or put on a *Bonnet*, or *Drab-ble*.

**Cat-HOOKS**. See *Cat*.

**HORIZON**; is that Circle of the Sphere which divides the Heavens and the Earth into Two Parts; an *Upper*. and a *Lower*.

*Sensible* **HORIZON**; is that Circle which limits our Sight, and may be conceiv'd to be made by some great Plain, or the Surface of the Sea.

It divides the Terrestrial Globe into Two Parts; the one *Light*, the other *Dark*; which are sometimes greater, or less, according to the Condition of the Place.

It Determines the Visible Rising and Setting of the *Sun*, *Moon*, or *Stars*, in any particular Latitude. For when any of these appear just at the *Eastern* Part of the *Horizon*, 'tis then said to *Rise*; and when it does so at the *Western* Part, 'tis then said to *Set*.

*Rational* or *Real* **Horizon**; is a great Circle which Divides the Globes into Two Equal Parts, or *Hemispheres*: And the Poles thereof, are the *Zenith* and *Nadir*; or the Two Points, one directly over our Heads, the other opposit to it under our Feet.

From this, the *Altitude* of the *Sun*, or *Stars*, is Accounted, which is their Height above the *Horizon*.

This Circle is Represented by the *Card* of the *Mariners-Compass*, which is Divided into 32 *Points*. See *Compass*.

**Right-HORIZON**; is that which cuts the *Equator* at *Right Angles*.

**Oblique-HORIZON**; is that which cuts the *Equator* *Obliquely*.

**Parallel-HORIZON**; is that where the *Pole* of the World is the *Zenith*: Or is that *Horizon* which either is in the *Equator*, or some *Parallel* to it.

**HORIZONTAL**; that is, *Parallel* to the *Horizon*.

**HORSE**; is a Rope made fast to the *Fore-Mast-Shrowds*, having a *Dead-Man's-Eye* at its *End*, thro' which the *Pennant* of the *Spritsail-Sheats* is recv'd: Its Use is, to keep the *Spritsail-Sheats* clear of the *Flukes* of the *Anchor*.

**HORSE**; is also, that Rope which is made fast to the *Shrowds*, to preserve him that heaves the *Lead* there, from falling into the *Sea*.

**HORSES**; the *Waps* are sometimes so called: As also, those short *Waps* that are seiz'd to the middle of the *Top-mast* and *Top-Gallant-mast-Stay*, wherein are recv'd the *Top-sail* and *Top-Gallant-sail Bow-lines*.

**HOUNDS**; are Holes in the *Cheeks*, at the *Top* of the *Masts*, thro' which the *Ties* run, to Hoise the *Yards*: The *Top-Mast* has but one Hole or *Hound*, and one *Tie*.

**HOWKER**, or *Houcre*; is a Vessel, common with the *Dutch*, built somewhat like a *Pink*, but Masted and Rigg'd like a *Hoy*:

They'll Sail well, and that near the *Wind*: They Tack soon and short, and Live in any *Sea*. The Largest *Houkers* carry about 200 *Tuns*; others there are of 50 or 60 *Tuns*: One of these, Mann'd with five or six *Sailors*, is sufficient to make an *East-India Voyage*.

**HOWSING-IN**: After a Ship is past the Breadth of her *Bearing*, and that she is brought in too narrow to her *Upper Works*, she is said to be *Housed-in*, that is, *Pinched in*.

**HOWLE**: When the *Futtocks*, or *Foot-Hocks* of a Ship, are Scarf'd into the *Ground-Timbers*, and Bolted; and the *Plank* laid on them up to the *Orlop*; the *Carpenters* say then, They begin to make the Ship *Howle*.

**HOY**, or *Huoy*; is a small Vessel, or *Bark*, whose *Yards* are not a-cross, nor the *Sail square*, like those of other Ships: Her *Sails* are cut like a *Misen*; so that she can sail nearer the *Wind*, than a Vessel with *Cross-Sail* can do.

**HOYSE**; the same with *Hoise*: Which see.

**HULKS**; are large Vessels, having their *Gun-Decks* from 113 to 150 *Feet Long*; and from 31 to 40 *Feet Broad*: They contain from 400 to 1071 *Tuns*: Their Use is chiefly for setting *Masts* of Ships, and the like.

**HULL** of a Ship; is the full Bulk, or *Main Body* of a Ship, without *Masts*, or any *Rigging*, from *Stem* to *Stern*.



*To Strike a Hull*; that is, in a Storm, to lie close and obscurely in the Sea, or tarry for some Consort, bearing no Sail, with the Helm lash'd a-*Lee*.

*To Hull, or Lie a-Hull, or Hulling*; is said of a Ship, when either in a dead Calm, (to prevent her beating the Sails against the Masts, by Rolling;) or in a Storm, when she cannot carry them, she takes all her Sails in, so that nothing but her Masts, Yards and Rigging are abroad; the Helm is lash'd fast to the Lee-side of the Ship: In this Condition, if she is a good Sailer, she will lie easily under the Sea, and make her Way one Point before the Beam.

*HULLOCK of a Sail*; is a Piece of the Mizen, or some other Sail, part open'd or left loose, all the rest being fast made up to the Yard-Arm; its Use is, to keep the Ship's Head to the Wind. In case a Ship will not *Weather-Coil*, to lay her Head the other Way; loose a *Hullock* of her *Fore-sails*, and then change the Helm to the Weather-side; by that means, she is made to fall off, and to lay her Head where her Stern was before.

*HURRICAN*, is a most furious Storm, which the *West-Indies*, and especially the *Caribbe-Islands*, are subject to; and which so dreadfully afflict them, in or about the Month of *August*. Their Extent and Continuance is but small, nor do they happen Yearly; but then their Violence is

unconceivably strange, and their Effects wonderfully surprising; the Sea flies in the Air in a terrible manner, and drowns all the adjacent Ground; insomuch that Ships have bin driven over the Tops of high Trees; many Leagues in the Land, and there left.

*HYDROGRAPHY*, is the Art which teaches how to Describe and Measure the *Sea*; giving an Account of its Tides, Counter-Tides, Soundings, Bays, Gulfs, Creeks, &c. As also the Rocks, Shelves, Sands, Shoals, Promontories, Harbours, Distance from one Port to another; and other Things remarkable on the Coasts.

*HYDROGRAPHICAL-Charts*, are certain *Sea-Maps*, Delineated for the Use of Pilots, and other Mariners, wherein are mark'd all the *Rhumbs*, or Points of the *Compass*: As also the Rocks, Shelves, Sands, and Capes; And the Meridians drawn Parallel one to another. See *Charts*.

## J

*JACK*; is that Flag that is hois'd up the *Sprit-sail-Top-mast-Head* of a Ship. See *Flags*.

*JACOB'S-STAFF*; the same with the *Cross-Staff*. See *Staff*.

*JEAR-CAPSTAN*, or *Jeer-Capstan*. See *Capstan*.

*JEER-ROPE*. See *Rope*.

**JEERS**; As, *To be brought to the Jeers*, (speaking of one to be Punish'd at the *Jeer-Capstan*.) See under the word *Ducking*.

**JETSON**, is a Thing cast out of a Ship, being in Danger of Wrack, and beaten to the Shore, by the Waters, or cast on the Shore by the *Mariners*.

**IMPREST**. See, *To Man a Fleet*.

**IRON-SICK**; is said of a Ship, whose Bolts, Spikes, or Nails, are so eaten with Rust, as to stand hollow in the Planks, and to make her Leake. This is prevented, by putting Lead over all the Bolt-heads under Water.

**JONKS**, or *Fonques*; are Vessels very common in the *East-Indies*: They are about the Bigness of our *Fly-Boats*; but differ in Form of Building, according to the different Methods of the Nations, in those Parts, they belong to.

Their Sails, oftentimes, are only of Reeds and of Matts; and their Anchors are made of Wood.

**JOURNAL**, at *Sea*, is a Book kept by the Officers of a Ship; where an Account of her Way is duly inserted, as also, the Changes of the Weather, with all Remarkable Accidents, and Occurrences.

**ISLAND**, or **ISLE**, is a Tract of Dry Land, environ'd with Water.

1. **ISLANDS** belonging to EUROPE, are,

The *Mediterranean* Islands, lying South of *Europe*.

The *Azores*, or *Western* Islands, lying West of *Spain*.

The *Britannic* Islands, lying North of *France*.

The *Scandinavian* Islands, lying in the North and *Baltic-Sea*.

The Island of *Ice-land*, lying West of *Scandinavia*.

2. **ISLANDS** belonging to ASIA, are,

*Ceylon*, and the *Maldives*, lying West of the *Isles of Sunda*.

The Islands of *Sunda*, lying West of the *Moluccoes*.

The *Moluccoes*, lying South of the *Philippine* Isles.

The *Ladron* Isles, lying East of the *Philippine*.

The *Philippine* Isles, lying South-West of the *Japan* Isles.

The *Japan* Islands, lying East of *China*.

3. **ISLANDS** belonging to AFRICA, are,

The *Madera*, lying West of *Barbary*.

The *Canary* Islands, lying West of *Bildulgerid*.

The *Cape de Verde* Isles, lying West of *Negroland*.

*St. Thomas's* Island, lying West of *Ethiopia*.



The *Princesss* Island, lying West of *Ethiopia*.

*St. Helena*, lying West of *St. Thomas*.

Isle of *Ascension*, lying North-East of *St. Helena*.

*Madagascar*, or *St. Lawrence*, lying East of *Ethiopia*.

The Isles of *Comore*, lying North-West of *Madagascar*.

4. ISLANDS belonging to AMERICA, are,

*Newfoundland*, lying East of *Terra Canadensis*.

*California*, lying West of *Nova Granada*.

*Terra del Fuogo*, lying South of *Terra Magellanica*.

The *Antilles*, Greater and Lesser.

The Greater *Antilles*, are *Cuba*, *Jamaica*, *Hispaniola*, *Porto-rico*, all East of *New Spain*.

The Lesser *Antilles*: As, *Caribee* Isles, lying South-East of the Greater *Antilles*.

The *Sororento*, lying North of *Terra-Firma*.

The *Lucayes*, or the *Bahama* Isles, lying South-East of *Florida*.

*Bermudas*, or *Summer-Isles*, lying East of *Florida*.

ISTMUS, is a narrow Neck of Land annexing a *Peninsula* to the Continent, by which People may go into the one from the other.

As in *Europe*; The *Isthmus* of *Corinth*, joining *Morea* to *Greece*.

The *Isthmus* of *Taurica Chersonesus*, joining *Taurica Chersonesus* to *Little Tartary*.

In *Asia*; The *Isthmus* of *Malacca*, joining *Malacca* to *Peninsula India* *intra Gangem*.

In *Africa*; The *Isthmus* of *Suez*, joining *Africa* and *Asia*.

In *America*; the *Isthmus* of *Panama*, joining *Mexico* to *Peru*.

JUNKES, signifies only, Old *Hawsers*.

JURY-MAST. See *Masts*.

## K

KECKLE; To *Keckle* the *Cable*, or *Bolt-Rope*, is to *Serve* it, or bind some small Ropes, or Old Clouts, about it, to prevent the *Cable* from galling in the *Hawse*, or *Bolt-Rope* from doing so against the Ship's *Quarter*.

KEDGER, or *Kedge-Anchor*. See *Anchor*.

KEDGING; is when a Ship is brought up and down in a narrow River, the Wind being contrary to the Tide, and yet she is to go with the Tide; then set the *Fore-Sail*, *Fore-Top-Sail*, and *Mizen-Sail*, and let the Ship drive with the Tide, so that they may *flat her about*: And if she happen to come over near the Shore, then having a small Anchor in the Head of the Boat, with a small *Hawser* fasten'd to it from the Ship, which let drop in the middle of the Stream, and

this will *wend*, or turn her Head about : When she is come fully about, they lift up the Anchor again; and this Working, is to *Kedge*, or *Kedging*; and this Anchor is call'd *Kedger*.

**KEEL**, is the first or lowest Piece of Timber in a Ship; it lies in the very bottom of her Hull, one End whereof is at the Stern, the other at the Stem; and into this are all the Ground-Timbers and Hooks fasten'd and bolted fore and aft.

*False-KEEL*; is a *Keel* put on under the first, in case the Ship be Shallow, and so Over-floaty, and Roll too much.

*Rank KEEL*; that is, a deep *Keel*; such as will keep the ship from Rolling.

**KEEL-HALE**, or *Keel-Rake*. See *Ducking*.

**KEEL-ROPE**. See *Rope*.

**KEELSON**, is a long Piece of Timber, like the *Keel*, laid over the *Floor-Timbers* of a Ship, lying within, as the other without, and directly over it; and fast bound together with strong Iron-Bolts thro' the Timbers and all.

**KENKS**, are Doublings in a Rope, or Cable, when Handed in or out, so that it does not run easie: Or when any Rope makes Turns, or Twists, and does not run free in the Block, then 'tis said to make *Kenks*.

**KETCH**, is a Vessel smaller than, and something like a *Hoy*; but is so built, that 'twill endure and live in any Sea, or Weather

whatsoever, and sails very well: such Vessels are very useful and proper to attend upon great Ships, for carrying their Stores, and other Necessaries.

**BOMB-KETCHES**, or **BOMB-Ships**, are those Vessels, with *Mortar-Pieces* on-board, which are employ'd in *Bombarding* an Enemy's Sea-Port-Towns, &c.

**KEVELS**, or *Chevils*, the same with *Knevels*; which see.

**KNAVE-LINE**, is a Rope made fast to the *Main* or *Fore-Top*, whence it comes down by Ties to the *Ram-head*, where 'tis reev'd thro' a small Piece of Wood, and so brought to the Ship's-side, and hal'd *taught* to the Rails: Their Use is, to keep the *Ties* and *Halliards* (when New) from turning about one another.

**KNECKS**, the same with *Kenks*; which see.

**KNEES**, are Crooked Pieces of Timber, bow'd like a *Knee*, that binds the *Beams* and *Futtocks* together, being bolted fast into them both: some of these stand right up and down, some along Ship; they are used about all the Decks: some saw'd or hew'd to that form, and some growing so, naturally, which are certainly the best for Service.

**KNEE-TIMBERS**, are those Timbers which are fit and useful for making *Knees* of, in Building of Ships.

*Carling-KNEES*. See *Carling*.  
*Knee of the Head*; that is, the Cut-water of the Ship.

**KNETTLES**,



**KNETTLES**; are two Pieces of Spun-Yarn, put together untwisted, with a Knot at each End, to seize a Block, Rope, or the like.

**KNEVELS**, or *Keve's*, are small Pieces of Wood, nail'd to the Inside of the Ship: Their Use is, to Belay the *Sheats* and *Tacks* unto.

**KNIGHTS**; are two thick short Pieces of Wood, commonly Carv'd like a Man's Head, with four *Shivers* in each; three for the *Halliards*, and one for the *Top-Ropes* to run in.

*Fore-KNIGHTS*, is that which stands fast bolted to the *Beams*, abaft the *Fore-Mast*.

*Main-KNIGHT*, is that which stands abaft the *Main-Mast*.

**KNOTS** used at Sea, are distinguish'd into these; *viz.*

*Wale-KNOT*, is a round *Knot* so made with the Lays of a Rope, that it cannot slip; and serves for *Sheats*, *Tacks*, and *Stoppers*.

*Bow-Line-KNOT* is so firmly made, and fasten'd to the *Cren-gles* of the Sails, that they must break, or the Sail split, before 'twill slip.

*Sheep-Shank-KNOT*, is to shorten a Rope without cutting it, which may be presently loosen'd, and the Rope not the worse for it.

**KNOTS** on the *Log-Line*, are the Divisions of it, which usually are Seven Fathom, or Forty-two Feet asunder; tho' they really should be *Fifty Feet*. And

as many *Knots* as the *Log-Line* runs out in Half a Minute, so many Miles does the Ship sail in an Hour; supposing her to run at the same Rate. See *Log*.

## L

**LABOUR**: At *Sea*, a Ship is said to *Labour*, when she *Rolls* and *Tosses* much.

**LADDERS**, in a *Ship*, are distinguish'd into Three sorts; *viz.*

*Bolt-Sprit-LADDER*, which is at the *Beak-Head*, made fast over the *Bolt-Sprit*, to get upon it when there is Occasion.

*Entring-LADDER*, made of Wood, and is placed in the *Wast* of the Ship.

*Gallery-LADDER*, made of Ropes, and hung over the *Gallery*, and *Stern* of Ships, for to come out, or go into a Boat by, in *Foul-Weather*, and *High-Sea*.

**LADLE**, is an Instrument to Load the *Guns* with *Powder*.

**LAGAN**, *Lagon*, or *Ligan*, is a *Wrack* which lies in the bottom of the *Sea*.

**LAND-FALL**; that is, to Fall in with the *Land*.

A *Good Land-Fall*, is when a Ship *makes* or sees the *Land* as she expected, or according to her *Reckoning*: And,

A *Bad Land-Fall*, signifies the contrary.

LAND-

**LAND-Lay'd**, or, *To Lay the Land*; that is, just to lose the Sight of it.

**LAND-LOCK'd**, is when *Land* lies all round the Ship, so that no Point of the *Compass* is open to the Sea: And if she is at Anchor in such a Place, she is said to *ride Land-LOCK'd*; and therefore is concluded to ride safe from the Violence of *Winds* and *Tides*.

**LAND-Mark**, is any Mountain, Rock, Steeple, Wind-mill, a Tree, or the like, near the Sea-side. As such a Steeple is a *Land-Mark* to *Sea-faring Men*,

**LAND is shut in**; that is another Point of *Land*, hinders the Sight of that which the Ship came from.

**LAND to**; *The Ship lies Land-to*: That is, She is so far off the Shore, that she can but just Ken (or discern) it.

**LAND-Turn**, is a Wind that blows from the Shore, in the Night, at certain Times, in most Hot Countries.

*To Set the Land*; that is, to see by the *Compass* how it bears.

A **HEAD-LAND**, or a *Point of Land*, is that which lies farther out than the rest. See *Point*.

**LANGREL-Shot**, is a Shot sometimes used at Sea, made of two Bars of Iron, with a Joint in the middle, by means of which it may be shorten'd, and so the better put into the Gun; at each end there is a Half-Bullet either of Lead or Iron:

This Shot, when Discharg'd, flies out at Length; and therefore will do the more Execution amongst the Enemy's Rigging, &c.

**LANNIARDS**, or *Lanniers*, are small Ropes reev'd into the *Dead-Men's-Eyes* of all Shrowds; either to slacken them, or to set them taught: The *Stays* of all *Masts* are set taught by *Lanniards*.

**LARBOARD**, is the Left-hand-side of the Ship, when you stand with your Face towards the Head.

**LARGE**: *A Ship goes Large*; that is, she goes neither before the Wind, nor upon the Wind, but, as it were, *Quartering* between both, with a fresh Gale, and all Sails drawing.

*To Sail with a Large Wind*; that is with a Fair Wind.

**LASH**, or *Lice*, signifies, to Bind, or Make fast; As, *To Lash the Bonnet to the Course*; or *the Drabler to the Bonnets*. Also, the Carpenter takes care that the *Spare-Yards* be *Lash'd* fast to the Ship's Side. And in a Rolling-Sea, the *Gunners* mind that the *Guns* be well *Lash'd*, lest they should break loose.

**LASHERS**, are those Ropes only, which bind fast the Tackles, and the Breechings of the Ordnance, when haled, or made-fast within Board.

**LASKETS**, are small Lines, like Loops, sow'd to the *Bonnets* and *Drablers* of a Ship, for to Lash or Lace the *Bonnets* to the *Courses*,



*Courses*, or the *Drablers* to the *Bonnets*.

**LASKING** ; *The Ship goes Lasking* : That is, She goes neither by the Wind, nor directly before the Wind : And 'tis much the same with going *Large*, or *Veering*, that is, going with a *Quarterly Wind*.

**LATCHES**, or *Latchets*, the same with *Laskets* ; which see.

**LATITUDE** of a *Place*, on the *Surface of the Globe*, is an Arc of the *Meridian* intercepted between the *Zenith* of the *Place*, and the *Equinoctial* ; and therefore is always Equal to the Height of the *Pole* of the *World* from the *Horizon*. Hence, the Distance of a *Ship*, from the *Equinoctial*, either *North* or *South*, counted on the *Meridian*, is her *Latitude* : So that if a *Ship* sail from the *Equinoctial*, or from a *Lesser Latitude* to a *Greater*, she is said to *Raise the Pole* : But if she sail towards the *Equinoctial*, or from a *Greater Latitude* to a *Less*, she is said to *Depress the Pole*. And in order to find the *Latitude of a Place* :

*First*, There must be given, the *Sun's Declination* : Which is taken from some *Correct Tables* of the *Sun's Declination*. See *Declination*.

*Secondly*, The *Sun's Meridian Altitude* : Which is taken by a *Quadrant*.

*Thirdly*, There must be given, the *Sun's Position*, or *Situation* upon the *Meridian*, *Northwards*,

or *Southwards*, in respect of the *Zenith* of the *Place* : And this is taken by the *Magnetic-Compass* ; that is, by *Setting the Sun*.

*Also*, 'tis necessary to *Observe*,

1. That the *Zenith* is always in the *Meridian*, and always 90 *Degrees* distant from the *Horizon*.

2. That if the *Meridian Altitude* of the *Sun* be *Subtracted* from 90 *Degrees*, the *Remainder* is the *Sun's Distance* from the *Zenith*.

3. That if the *Meridian Altitude* of the *Sun* be 90 *Degrees*, then the *Sun* is the *Zenith*.

4. That the *Distance* of the *Zenith* from the *Equator*, is the *Latitude of the Place* ; and is always Equal to the *Elevation of the Pole*.

5. That if the *Equator Cross* the *Zenith*, then the *Place* lies under the *Equator* ; and has no *Latitude*.

6. That if the *Equator* be *North* of the *Zenith*, then the *Place* is in *Southern Latitude* : Or if the *Equator* be *South* of the *Zenith*, then the *Place* is in *Northern Latitude* : And *vice-versâ*, in each *Particular*.

7. That when the *Sun* is in the *Equator*, it has no *Declination*.

8. That when the *Sun* is *North* of the *Equator*, it is in *North Declination* : Or when *South* of the *Equator*, in *Southern Declination* : And *vice-versâ*, in each *Particular*.

These

These being thorowly understood; the *Latitude* of any *Place* is readily found, by the *Rules* given for *Working an Observation*, under the word *Observation*: Which see.

But to find the *Latitude* of a *Place*, by a *Chart*, see *Mer-cator's Chart*.

*Middle-LATITUDE*, is *Half* the Sum of any Two given *Latitudes*.

*Middle-LATITUDE-Sailing*. See *Middle*.

*Difference of LATITUDE*, is the *Northing* or *Southing* of a *Ship*; or the *Way* gain'd, to the *Northward* or *Southward* of the *Place* she *Departed* from: Or 'tis the *Difference* between the *Latitudes* of any two *Places*, shewing how far one of them is to the *Southward* or *Northward* of the other. And 'tis easily found, by this *Rule*, (the *Latitudes* being given:)

1. *If the Places are on the same side of the Equinoctial, their Difference is the Difference of Latitude sought.*

2. *If the Places are on contrary sides of the Equinoctial, that is, one in North, and the other in South Latitude, their Sum is the Difference of Latitude sought.*

*LAKE*, is a small *Collection* of deep *Standing-Water*, intirely surrounded with *Land*, and having no visible or immediate *Communication* with the *Sea*.

*LAUNCH*, signifies, to put out: As, *Launch the Ship!* that

is, Put her out of the *Dock!*

*Launch out the Capstan-Bars!* that is, Put them out!

*Launch aft*, or *forward on*; that is, when *Things* are stow'd in the *Hold*, to put them more *ast*, or *forward on*.

*Launch, Ho!* that is, when a *Yard* is *Hoisted* high enough, *Hoise* no more! Or, in *Pump-ing*, if the *Pump* sucks, *Pump* no more!

*LAY the Land*. See *Land*.

*LEAD*, as, *Sounding-Lead*, or *Deep-Sea-Lead*, is *Six* or *Seven Pound Weight* of *Lead*, near a *Foot* long, and fasten'd at the *End* of the *Sounding-Line*, or *Deep-Sea-Line*.

*Heave the Lead*; that is, to *Sound*, or to find where the *Ship* may sail, by the *Depth* of *Waters*. He that *Heaves the Lead*, stands by the *Horse*, or in the *Chains*, and sings the *Depth* he finds.

*LEAGUE*, is a *Measure* of *Length* commonly used at *Sea*, and is reckon'd to be *Three English Miles*.

*LEAK*, is a *Hole* in the *Ship*, thro' which the *Water* comes in.

*Spring a Leak*; that is said of a *Ship* that begins to *Leak*.

*To Stop a Leak*, is to put into it a *Plug* wrapt in *Okum*, and well *Tarr'd*, or in a *Tarpawling Clout*, to keep the *Water* out; or nailing a *Piece* of *Sheet-Lead* upon the *Place*.

*LEDGES*, are small *Pieces* of *Timber* lying a-thwart *Ships*, from the



the *Waft-Trees* to the *Roof-Trees*: They serve to bear up the *Gratings* or *Nettings* over the Half-Deck.

LEE, is a word of various Significations; tho' generally, the Part opposite to the Wind, is meant by it: As,

LEE-Shore, is that *Shore* against which the Wind blows.

LEE-Latch: *Have a Care of the Lee-Latch!* That is, Take Care that the Ship don't go to the *Lee-ward* of her Course, or too much to *Lee-ward*, or too near the Shore.

A-LEE the *Helm!* that is, Put the *Helm* to the *Lee-ward-side* of the Ship.

To Lie by the *Lee*; or, To Come up by the *Lee*; is to bring the Ship so, that all her Sails may lie flat against her Masts and Shrouds, and that the Wind may come right upon her Broad-side.

LEE-Fang, is a Rope reev'd into the Cringles of the Courses, to hale in the Bottom of the Sail, that the Bonnets may be Laced on: As also, to Take in the Sail.

LEE-Seel. See *Seel*.

Leeward-Ship, is that which stands not so near the Wind.

Leeward-Tide. See *Tide*.

Lee-Way. See *Way*.

LEETCH of a Sail, is the Outward Edge, or Skirt of the Sail, from the Earing to the Clew; or the Middle of the Sail, between the Earing and the Clew.

*Leetch-Lines*, are small Ropes made fast to the *Leetch* of the Top-sails, (to which they only belong,) and reev'd into a Block at the Yard, close by the Top-sail-Ties: They serve to hale in the *Leetch* of the Sail, when the Topsails are to be taken in.

LEGS, are small Ropes, of about a Foot in Length, put thro' the Bolt-Ropes of the *Main*, and *Fore-sail*, in the *Leetch* of each; their Ends are spliced into themselves: They have a small Eye, into which the *Mirtnets* are made fast by two Hitches.

LET-Fall the *Main-sail*, *Fore-sail*, or *Sprit-sail*; is to put out those Sails, when their Yards are hoisted up aloft.

LEVANT: By this word is meant the *Eastern-part* of a Continent: But with the Seamen, it signifies the *Mediterranean-Sea*.

LIEUTENANT, is an Officer on-board a *Man of War*, who, in the *Captain's* Absence, Commands in Chief. See *Officers*.

LIFTS, are Ropes which belong to the Yard-Arms of all Yards: They serve to Top the Yards, that is, to make the Ends of the Yards hang higher, or Lower, as Occasion requires.

Top-Sail-Lifts, serve as *Sheets* for the *Top-Gallant-Yards*.

Stardin,-Lifts, are those of the *Spritsail-Yards*.

Topping the Lifts; that is, haling of the Lifts: As, Top a Starboard! or, Top a Port!

that

that is, Hale upon the *Starboard*, or *Larboard-Lift*!

LIGAN, the same with *Lagan*; which see.

LIGHTER; is a Broad Large Boat, which goes with Sails and Oars: They are very common in the River *Thames*; and are used for carrying of Timber, Coals, and other Goods, up and down the River: They are also used for Carrying *Ballast*, &c.

LIGHT-FRIGATE See *Frigate*.

LIMBER-HOLES, are little Holes cut thro' the Floor-Timbers of a Ship, serving to let the Water to the *Well* of the *Pump*: Which else would lie between those Timbers where the Keel-Rope runs.

LINE: *Navigators* usually call the *Equator*, or *Equinoctial-Line*, simply the *Line*. And at *Sea*, they have a Ridiculous Ceremony; That when *Sailors* Cross the *Line*, or *Tropic*, that have not bin there before, they must pay certain Forfeitures Demanded of them, or else be *Duck'd*, or *Baptiz'd*, (as they call it,) either from the Main-Yard-Arm, or otherwise: This Custom is inviolably used by most Nations, who practise it indispensably in *East-India* Voyages; and each practises it differently: Nay, those of the same Nation puts it in Execution in different manner. It is perform'd, by some, thus, (by way of *Baptism*, as was said before;) The Ship's Company Range themselves in two Lanes, each

with a Bucket in his Hand, with Tubs of Sea-Water ready by them: Then the *Boatwain's Mate*, or some such Officer, comes to the Foot of the Main-Mast, with Visage all bedawb'd, and his Body all roll'd in Ropes, some hanging down from his Shoulders; and after him, in Order, there follows five or six Sailors dress'd in a like manner: And holding in his Hand some Book of Navigation; he that is to be *Baptiz'd*, comes and Kneels before him, and puts his Hand upon the Book, and is obliged to Swear solemnly, and sincerely, That as often as there is Occasion for *Baptizing* or *Ducking* Others; he will exercise upon them, the same Ceremony as they are about to exercise upon him, without ever thinking to exempt them from it. After this, he arises, and goes towards the Head of the Vessel, thorow the Lane of Tubs, and Seamen who Attend with Buckets full of Water, so that as he goes along, they throwing it upon him, he receives his *Baptism* sufficiently.

LINES, are small Ropes belonging to the Ship; of which there be several, as *Bow-Lines*, *Bunt-Lines*, *Knave-Lines*, *Log-Lines*, *Smiting-Lines*, *Leetch-Lines*, *Sounding-Lines*, &c. which see.

LINE of *Battle*; is the Disposition of the Stations of a Fleet, at the Time of an *Engagement*: For the Order of *Battle*, is to draw as much as possible all the Ships



Ships into a Right Line, as well to gain and keep the Advantage of the Wind, as to run the same Board. Those of the Van, Centre, and Rear, place themselves in the same Line, when the Squadron, or Division, are United. See *Engagement*.

**LIVE** ; *To Live* ; that is, To Endure the Sea : As they say of a Boat, That it will *Live* in any tolerable Sea ; that is, It will Endure, or bear with, any Sea.

**LOCKERS**, are those little Boxes, or Seats, in a Ship, contrived to put or Stow any Thing in ; as in little Cupboards, or Chests.

**LOG**, is a little Piece of Wood of a Triangular Form, with as much Lead in one end thereof, as will serve to make it swim upright in the Water ; at the other End is made fast to the *Log-Line*.

**LOG-LINE**, is a small *Line*, having the *Log* tied to one End : 'Tis kept wound about a Reel for that Purpose. The *Log-Line* for about 10 Fathom, in Small Ships, but more in Great ones, from the *Log*, has, or ought to have, no *Knots*, or *Divisions* ; because so much should be allowed, that the *Log* may be out of the Eddy of the Ship's *Wake*, before the *Glass* be turn'd up : But then the *Knots* begin, and ought to be at least 50 Feet from one another ; tho' the common Practice at Sea, is to have them but 7 *Fathoms*, or 42 *Feet* distance. The Use of

the *Log* and *Log-Line*, is to make an Estimate of the *Ship's Way*, or *Distance run*, by *Heaving the Log* every Hour, or every two Hours.

*To Heave the Log*, is first to throw it into the Water, and let it run away so far, as to be out of the Eddy of the Ship's *Wake* ; then One having a Half-Minute-Glass ready in his Hand, turns it up, just when the first *Knot* runs off the Reel ; and then the *Line* running easily off as the Ship move, when the *Glass* is out, he cries, *Stop!* The other stops the Reel : Then they count the *Knots* run out, as also the odd *Fathoms*, or *Feet*, (if there be any.) And they reckon ; For as many *Knots* as run out in Half a Minute of Time, so many Miles the Ship sails in an Hour ; and for every 5 odd Feet, a 10th Part of a Mile more. Thus 4 *Knots* in Half a Minute, is 4 Miles an Hour : And 3 *Knots*, 45 Feet in Half a Minute, is  $3\frac{9}{10}$  Miles an Hour.

The Common Division of the *Log-Line*, is grounded upon this *Supposition* ; That a *Mile* contains 5000 *Feet*, and 60 of such *Miles* a *Degree* ; whence a *Degree* would contain 300000 *Feet*. Now Half a Minute being the 120th Part of an Hour, and the 120 Part of 5000 *Feet* is 41,6, &c. or near 42 *Feet*. So that as many times 42 *Feet* as the Ship runs in Half a Minute, so many *Miles* she runs in an Hour : Therefore, according to this

*Suppo-*

*Supposition*, 42 Feet must be the Distance between *Knot* and *Knot* upon the *Log-Line*.

But this *Supposition*, and consequently the *Practice* from it, is altogether *Erroneous* : For a *Degree* is now actually found to contain 360000 Feet at least ; wherefore, a *Minute*, or a *Mil*, must contain 6000 Feet, (which is the *True Sea-Mile*.) And since Half a *Minute* is the 120th Part of an *Hour*, the 120th Part of 6000 Feet is 50 Feet : Therefore as many times 50 Feet as the Ship runs in Half a *Minute*; so many *Miles* must she go in an *Hour*, (supposing she goes at the same rate ; ) and for every 5 odd Feet, a 10th Part of a *Mile* more ; therefore, the Distance between *Knot* and *Knot* must be 50 Feet.

LOG-BOARD, is a *Board*, or *Table*, divided usually into Five *Columns* ; The *First Column* contains the *Hours of the Day*, from *Noon* to *Noon* : In the *Second Column* is placed the *Ship's Course* : In the *Third* and *Fourth Column* is placed the *Distance run in Knots, Fathoms, and Half-Fathoms*, or sometimes *Feet* : In the *Fifth Column* is placed the *Winds, Weather, Accidents, &c.*

LOG-BOOK, is a *Book* *Column'd* and *Ruled*, by some, like the *Log-Board*, wherein the *Log-Board's Account* is every *Noon* *Entred*, with the *Observations* then made ; And from hence 'tis *Corrected*, and *Transcrib'd* into the *Journals*.

LONG-BOAT. See *Boat*.

LONGITUDE of a *Place*, is its *Distance*, ( measured upon the *Equator*, or some *Parallel* to it, ) from the *First Meridian*, which may be taken, ( at pleasure, either *Eastward*, or *Westward*, whence 'tis call'd *Eastern*, or *Western Longitude*. And because the *Meridian* of any *Place* *Divides* the *Globe* ( whose *Whole Circumference* is reckon'd 360 *Degrees* ) into Two *Equal Parts*, call'd *Hemispheres*, the one *Eastern*, and the other *Western* : Therefore the *Greatest Longitude* a *Place* can have, is that of  $\frac{360}{2}$ , or 180 *Degrees*.

And since the *Longitude* of *Places* is *Measured* either upon the *Equator*, or some one of its *Parallels*, which continually decrease towards the *Poles* of the *Equator*, or of the *World*, and yet are each of them divided into 360 *Equal Parts*, or *Degrees* ; therefore the *Degrees of Longitude* ( according to this *Definition* ) are not every where *Equal* one with the other, and consequently do vary in their *Proportion* to the same sort of *Miles*, as the *Parallels*, on which they are *Measured*, are more or less distant from the *Equator*, according to this *Proportion* :

As the *Co-Sine of the Latitude*,  
To the *Longitude in Degrees of the Parallel* ;  
So is the *Radius*,  
To the *Longitude in Degrees of the Equator*.

Whence the following

TABLE,



**T A B L E,** *Shewing to every Degree of Latitude, the Exact Number of Miles, Seconds, and Thirds, that are Answerable to One Degree in the Equator.*

Latitude.	Min. Sec. & Th. of the Equator, Equivalent to 1 Deg. of the Parallel.			Latitude.	Min. Sec. & Th. of the Equator, Equivalent to 1 Deg. of the Parallel.			Latitude.	Min. Sec. & Th. of the Equator, Equivalent to 1 Deg. of the Parallel.		
	D.	M.	S.		T.	D.	M.		S.	T.	D.
1	59	59	28	31	51	25	48	61	29	5	19
2	59	57	48	32	50	52	59	62	28	10	5
3	59	55	4	33	50	19	13	63	27	14	22
4	59	51	13	34	49	44	33	64	26	18	8
5	59	46	17	35	49	8	56	65	25	21	26
6	59	40	16	36	48	32	28	66	24	24	15
7	59	33	11	37	47	55	6	67	23	26	37
8	59	24	58	38	47	16	50	68	22	28	36
9	59	15	41	39	46	37	44	69	21	30	8
10	59	5	19	40	45	57	35	70	20	31	16
11	58	53	52	41	45	16	57	71	19	32	21
12	58	41	20	42	44	35	20	72	18	32	28
13	58	27	44	43	43	52	51	73	17	32	32
14	58	13	3	44	43	10	1	74	16	32	18
15	57	57	21	45	42	25	36	75	15	31	45
16	57	40	32	46	41	40	46	76	14	30	55
17	57	22	43	47	40	55	12	77	13	29	49
18	57	3	49	48	40	8	52	78	12	28	29
19	56	43	52	49	39	21	49	79	11	26	55
20	56	22	53	50	38	34	3	80	10	25	8
21	56	0	53	51	37	45	33	81	9	23	9
22	55	37	51	52	36	56	23	82	8	21	1
23	55	13	56	53	36	6	33	83	7	18	44
24	54	48	59	54	35	16	3	84	6	16	18
25	54	22	43	55	34	24	53	85	5	13	47
26	53	55	39	56	33	33	5	86	4	11	8
27	53	27	38	57	32	40	43	87	3	8	3
28	52	58	37	58	31	47	43	88	2	5	39
29	52	28	38	59	30	54	9	89	1	2	49
30	51	57	42	60	30	0	0	90	0	0	0

'Tis plain, That by the preceding *T A B L E*, having the *Longitude* of a *Place*, ( whose *Latitude* is known ; ) the *Meridional Distance*, or its *Easting*, and *Westing* in *Miles*, from the *Meridian* of another *Place*, counted in the *Proper Parallel* of *Latitude*, is easily found : That is, The *Longitude* may be turn'd into *Miles*, by Multiplying the *Degrees* in the *Longitude* given,

by the Number of *Miles* Proportional to One *Degree* in the *Latitude* given.

Thus the *Longitude* of *Lisbon* from *London*, is 10 *Deg. West*, its *Latitude* 39 *Deg. North* : At which *Distance* from the *Equator* ( by the *Table* ) One *Degree* of *Longitude* is esteem'd Equal to 46', 37", 44"". Therefore the *Distance* of *Lisbon* from the *Meridian* of *London*, is,

$$\left( 46' \times 10 + 37'' \times 10 + 44''' \times 10 = \right) 466 \frac{7}{25} \text{ Miles West.}$$

In Order for finding the *Longitude* of any *Place*, 'tis necessary to Observe,

*Meridian* of the *Place* whose *Longitude* is sought ; then that *Place* lies in *Western Longitude* ; if later, then in *Eastern Longitude*.

1. That the Whole *Circumference* of the *Heavens*, which is reckon'd to be 360 *Degrees*, passes from *East* to *West*, thro' the *Meridian* of any *Place*, in 24 *Hours* ; and consequently, by *Proportion*, 15 *Degrees* in One *Hour*, One *Degree* in 4 *Minutes* of an *Hour*, &c.

And the *Difference* of *Time* between the coming of any *Cælestial Body* to the *First Meridian*, and to the *Meridian* of any other *Place*, and consequently, the *Longitude* of that other *Place*, is found by these following *Methods* :

2. That the *Longitude* of any *Place*, ( being the *Distance* of its *Meridian* from the *First Meridian*, or some *Fixed* one, ) is found, by finding the *Difference* of *Time* between the coming of any *Point* of the *Heavens*, or any *Cælestial Body*, to one *Meridian*, and to the other : For the *Difference* of *Time* turn'd into *Degrees*, is the *Longitude* sought.

I. To find the *Longitude* of a *Place*, by an *Eclipse* of the *Moon*.

3. That if the *Cælestial Body* comes sooner, or earlier, to the *First Meridian*, than it does to

By a *Clock*, or *Watch*, duly Rectified, Observe at what *Time* the *Moon*, or any remarkable *Spots* thereof, enters into, or comes out of the *Shade* of the *Earth* ; and compare the *Time* when any of these *Circumstances* happen at the *Place* where you make the *Observation*, with the *Time* of their happening at the

*First*



*First Meridian* ; The Difference of these two *Times*, being turn'd into *Degrees* and *Minutes*, is the *Longitude* sought.

the same *Satelles* at the *First Meridian* ; the *Difference of Time* reduced into *Degrees*, gives the *Longitude* sought.

## E X A M P L E.

II. To find the *Longitude* of a *Place*, by the *Satellites* of *Jupiter*.

By a *Clock*, or *Watch*, duly Rectified, Observe the *Time* of the *Immersion*, or *Emerision*, of any of the said *Satellites* : Which being compar'd with the *Time* of *Immersion*, or *Emerision*, of

The *Beginning* or *End* of an *Eclipse* of the *Moon* ; The *Immersion*, or *Emerision*, of a *Satelles* of *Jupiter*, is Observed at a certain *Place*, to be at *Eleren* at *Night* ; But at *London*, it happens to be at 52 *min.* past *Nine*. Requir'd, The *Longitude* of that *Place* from *London*?

Ans<sup>r</sup>. 17 *Deg.*

For 11 *h.* 00 *m.* — 9 *h.* 52 *m.* = 1 *h.* 8 *m.* = 17 *Deg.*

III. To find the *Longitude* of any *Place*, by a *Clock*, or other *Automaton*, so *Contriv'd*, and *Made*, as to keep the same *Uniform*, *Just*, or *Regular Motion*, in all *Parts* of the *Earth*.

The *Clock* being Rectified to the *Time* at the *First Meridian*, or any *Place* from whence you *Depart*, ) shall, if duly attended afterwards, shew, in any *Part* of the *World*, the *True Time* at the *First Meridian*, (or the *Place* from whence you *Departed*.) Wherefore, having found likewise (either by the *Sun's Altitude* in the *Day*, or by some *Star's Altitude* in the *Night*.) the *True Time* at that *Place* to which you are come ; The *Difference* between the *Time* thus found, and the *Time* of the *Clock*, being converted into *Degrees* and *Minutes*, shew the *Lon-*

*gitude* of the *Place* where you are.

Thus, in the former *Example* ; The *Index* of a *Regular Clock*, or *Automaton*, Rectified to the *Meridian* of *London*, and carried to the *Place* where the *Observation* was made, would point to 52 *min.* past *Nine* ; when the *Hour* of the *Night* being found at that *Place*, by taking the *Altitude* of a *Star*, would be *Eleven*.

For finding the *Longitude*, at *Sea*, by means of the *Course Steer'd*, and *Distance Run*, &c. either by the *Meridional Parts*, or by the *Middle-Latitude-Sailing* : (See *Mercator's Sailing*, or *Middle-Latitude Sailing* ) And the same is found very readily, and sufficient for our *Daily Practice* at *Sea*, by the help of the *Table of Difference of Latitude and Departure* ; as may be seen in the *Use* of that *Table*, in *Mr. Jones's Treatise of Navigation*, Edit. 2<sup>d</sup>.

**LOOF**, or *Loof* of a *Ship*, is that Part of her aloft, which lies just before the *Chest-Trees*.

**LOOF-Pieces**, are those *Guns* which lie at the *Loof* of the *Ship*.

**LOOF-Hook**. See *Hook*.

**LOOF-Tackle**, is a small *Tackle*, serving to lift all small *Weights* in or out of a *Ship*.

**LOOF**, or *Luff*, is also a Word used in *Conding* of a *Ship*: As,

*Luff! Keep your Loof!* That is, Keep the *Ship* Near the *Wind!*

*Loof-up!* That is, Keep Nearer the *Wind!*

*To Loof into a Harbour*; is to *Sail* into it, close by the *Wind*.

*To Spring the Loof*; is when a *Ship*, that before was going *Large* before the *Wind*, is brought close by the *Wind*.

**LOOM**: The *Looming* of a *Ship*, is her *Perspective*, as she appears at a *Distance*, Great or Little.

**LOOM-Gale**; is a gentle, easie *Gale* of *Wind*, in which a *Ship* can carry her *Top-sails*.

**LOOP-Holes**, are *Holes* made in the *Coamings* of the *Hatches*, for *Close-Fights*, and other *Conveniencies*.

**LOUF**, the same with *Loof*; which see.

**LOW-Water**. See *Water*.

**LOXODROMIC-Line**, is the *Line* of the *Ship's Way*, when she sails upon a *Rhumb* Oblique to the *Meridian*.

**LOXODROMIC-Tables**, are the *Tables* of *Rhumbs*, or the *Traverse Table* of *Miles*, with

the *Difference* of *Latitude* and *Longitude*; by which the *Sailor* may easily find his *Course*, *Distance*, *Latitude*, or *Longitude*; and Practically *Resolve* all the *Cases* of *Sailing*.

**LUFF**, the same with *Loof*; which see.

**LUST**: *The Ship* has a *Lust* to the *Starboard*, or *a-Port*; that is, She is inclin'd to *Heel* that way.

**LYE** under the *Sea*; is said of a *Ship*, when her *Helm* is lash'd fast *a-Lee*, and she lies *a-Hull*, that the *Sea* breaks upon her *Bow*, or *Broadside*.

**LYE a-Hull**. See *Hull*.

**LYE a-Try**. See *Try*.

## M

**MAGNETIC-Needle**, is that *Needle*, or *Wire*, in the *Card*, or *Flye* of the *Sea-Compass*, which is *Touch'd* by the *Magnet*, or *Loadstone*; and hence has the wonderful *Property* of *Pointing* towards the *Poles* of the *World*. This *Property* of the *Magnet* was *Discover'd* by *Roger Bacon*, an *Englishman*, who lived in the *Time* of *K. Edward* the *Third*.

**MAGNETICAL-AMPLITUDE**. See *Amplitude*.

**MAGNETICAL-AZIMUTH**. See *Azimuth*.

**MAGNETICAL-Meridian**. See *Meridian*.

**MAIN-Beam**. See *Beam*.

**MAIN-**



MAIN-Capstan. See *Capstan*.

MAIN-Mast, MAIN-Top-Mast, MAIN-Top-Gallant-Mast. See *Mast*.

MAIN-Misen. See *Masts*.

MAN of War ; that is, a *Ship of War*. See *Rate*.

MAN a Ship, or Fleet ; is to Provide them with a sufficient Number of Men, for an Expedition.

In *Manning the Navy*, 'tis usual to Promise, by *Proclamation*, a Bounty to all Seamen, and Able-bodied Landmen, who come into the Service by a certain Time ; which is frequently Two Months Pay, and seldom more. This does indeed prevail upon Many ; but yet great Numbers do conceal themselves until the Fleet is at Sea, and Others lurk about even till the Time limited, for such Bounty, is near expired ; which does in no little measure prevent the *Fleet's* being in a Readiness for an Early Campaign.

And as Seamen are thus Encourag'd to Enter themselves Voluntarily, so is there another Method used, to Compel them to it ; and that is *Pressing*, by *Warrants* from the Lord High-Admiral to the Captains, and by them Assign'd to their Lieutenants : And to render this the more Effectual, Vessels are purposely Hired into the Service, to proceed from Place to Place, with those *Officers*, and their *Press-Gangs*, not only to Receive *Voluntiers*, but to Impress what

Men they can light on : But their Success has bin very uncertain, and always very Expensive ; Therefore it were much to be wish'd, in a Matter of so great a Consequence to the Nation, that more Speedy and Effectual Methods could be taken for *Manning the Fleet*.

MAN the Capstan ! See *Capstan*.

MAN the Top ! or Yard ! That is, when the Men are Commanded to go up to the *Top*, or *Yard*, for some particular Service.

MAN the Side ! or Ladder ! That is, when an *Officer*, or any Person of Fashion, is at the *Ship's Side*, ready to come aboard, the Men are Commanded to Wait, and help him up the Side.

MANGER, is a Circular Place, made with Planks fasten'd on the Deck, right under the *Hawses* ; for to receive the Sea-Water, beating in at the *Hawses*, in a Stress of Weather.

MARINE, of or belonging to the Sea ; from *Mare*, the *Sea*.

MARINER, a *Seaman*. See *Sailor*.

MARINERS-COMPASS. See *Compass*.

MARINES, are *Sea-Soldiers*.

MARK, *Land-Mark*. See *Land*.

MAR-LINE, a small Line of untwisted Hemp, very plyable, and well Tarr'd ; serving to seize the Ends of Ropes, and keep them from Ravelling out ; or the Straps at the *Arse* (or Lower-end) of the *Blocks*.

**MAR-LINE** a *Sail*; that is, when the *Sail* is rent out of the *Bolt-Rope*, to make it fast with *Mar-Line*, put thro' the *Eye-let-Holes* made in it for that purpose, unto the *Bolt-Rope*, till it can be Mended.

**MAR-LINE-Spike**, is a little Piece of *Iron*, to splice small *Ropes* together; as also to open the *Bolt-Rope*, when the *Sail* is sow'd unto it.

**MARTNETS**, are small *Lines* made fast to the *Leetch* of the *Sail*, and reev'd thro' a *Block* at the *Topmast-Head*, and so they come down by the *Mast* to the *Deck*. They serve, in *Furling* the *Sail*, to bring that part of the *Leetch*, which is next the *Yard-Arm*, close up to the *Yard*, so that the *Sail* may the better be *Furl'd* up.

**Top-MARTNETS**, are those which belong to the *Top-sails*; they are made fast to the *Head* of the *Top-Gallant-Mast*, and their *Fall* comes down only to the *Top*.

*Top the Martnets!* That is, *Hale* them up!

**MASTER-ATTENDANT**. See *Officers*.

**MASTER** of a *Ship*, is the next *Officer* to a *Lieutenant*; he has the general *Conduccion* of the *Way*, and *Sailing* of the *Ship*, in his *Charge* and *Care*: He *Directs*, and *Shapes* the *Course* that she is to *Sail*; and *Commands* all the *Sailors*, for *Steering*, *Trimming*, and *Sailing* the *Ship*: He is to keep the most

accurate *Account* of the *Ship's Way*, and be at all times able to give *Estimate*, or *Prick* off her *Place* on the *True Sea-Chart*. He has *Mates*, to assist him in his *Office*.

In *Merchant-men*, the *Master* is the *Chief-Officer*.

**MASTS** of a *Ship*; of which, the *Principal* ones, are, the *Main-Mast*, *Fore-Mast*, *Misen-Mast*, and *Bow-sprit*.

**Main-MAST** of a *Ship*, is a long Piece of *Round Timber*, standing upright in the *Middle*, or *Waist* of the *Ship*; it carries the *Main-Yard*, and *Main-Sail*. Its *Length*, according to some should be  $2\frac{1}{2}$  of the *Length* of the *Midship-Beam*. Others give this *Rule*, for finding what *Length* it should be; viz.

*Multiply* the *Breadth* of the *Ship* (in *Feet*) by 24: From the *Product*, cut off the last *Figure* towards the *Right-Hand*; the rest shall be the *Length* of the *Main-Mast* in *Feet*.

As for **EXAMPLE**: Suppose the *Length* of the *Midship-Beam* was 30 *Feet*; 24 times 30 is 720; then cutting off the last *Figure*, there rests 72 *Feet*, the *Length* of the *Main-Mast* required.

As for the *Thickness* of the *Main-mast*, 'tis usual to allow an *Inch* to every *Yard* in *Length*.

**Fore-MAST** of a *Ship*, is a *Round large Piece* of *Timber*, standing in the *Fore-part*, or *Fore-Castle*, of the *Ship*; it carries



carries the *Fore-Sail*, and *Fore-Yard*. It's Length, by some, is to be  $\frac{8}{9}$  of the *Main-Mast*; and by others,  $\frac{4}{5}$  thereof.

*Misen-MAST* of a Ship, stands aft, in the Sternmost-part of the Ship: In some Great Ships there are two of these; that next the *Main-Mast*, is call'd, the *Main-Misen*; and that next the *Poop*, the *Bonaventure-Misen*. The Length of the *Misen-Mast*, is, by some, accounted the same with the Height of the *Main-Top-Mast* from the *Quarter-Deck*; or Half the Length of the *Main-Mast*, and Half as Thick.

*Top-MASTS* of a Ship, are those made fast, and secure unto the Heads of the *Main-Mast*, *Fore-Mast*, *Misen-Mast*, and *Bow-sprit* respectively. See *Top*.

*Top-Gallant-MASTS* of a Ship, are those set fast on the Head of the *Main*, and *Fore-Top-Masts*; whence are call'd, the *Main-Top-Gallant-Mast*, and *Fore-Top-Gallant-Mast*: They carry *Flag-Staffs* on their *Tops*, whereon the *Flags*, *Pendants*, &c. hang.

*Jury-MAST*: When a *Mast* is born by the Board, in a Storm, or Fight, the Seamen set up, in the room of it, another made of Yards, or other Pieces of Timber, such as they can get, spliced, or fish'd together, wounding them with Ropes: With this they make a shift, till better provided; and they call it, a *Jury-Mast*.

*Armed-MAST*: that is, made of more than one Tree.

*Mast a Ship*, is to set up her *Masts*; wherein great Care ought to be taken.

*Masted*: A Ship is said to be *Masted*, when she has all her *Masts* compleat.

*Over-Masted*, or *Taut-Masted*, when her *Masts* are either too-Long, or too-Big; which makes her lie too-much down by the Wind, and Labour too-much a-Hull.

*Under-Masted*, or *Low-Masted*; when her *Masts* are either too-Small, or too-hort: in which case, she cannot bear so great a Sail as should give her true Way.

*To Spend a Mast*; is when it is broke by Foul-Weather.

*To Spring a Mast*; is when 'tis Crack'd in a y Place.

*M-AST-Steps*. See *Steps*.

*MATES*, are Assistants to the several Officers a-board a Ship; as, *Master's Mate*, *Surgeon's Mate*, *Gunner's Mate*, *Carpenter's Mate*, *Boatswain's Mate*, *Cook's Mate*, *Corporal's Mate*.

*MATS*, are a kind of thick Clouts, wove out of Spun-Yarn, Sinnet, or Thrums; they are used, to preserve the *Main* and *Fore-Yards* from galing against the *Masts*, at the *Tyes*, and at the *Gunnel* of the *Loof*: They also serve to keep the Clew of the Sail from gallig there; and to save the Clews of the *Fore-Sail* at the *Beak-head* and *Bow-sprit*.

MERCATOR's or WRIGHT's *Chart*, or *Projection*, is the True Projection of the Globe in *Plano*: It differs from the Common *Plain Chart*, in this; That on the *Plain Chart*, the *Meridians* are Right Lines, all Parallel one to the other, and consequently do never meet; yet they cut the *Equator*, and all *Circles of Latitude*, at Right Angles, in the *Globe*: And all *Parallels* to the *Equator* (being *Lesser Circles*) are here made Equal to the *Equator* it self (being a *Great Circle*,) and therefore the *Degrees* of those *Parallel* (or *Lesser Circles*) are Equal to the *Degrees* of the *Equator*, or any other *Great Circle*; which is manifestly false, and contrary to the Nature of the *Globe*. For the *Meridians* on the *Globe* do all meet in the *Poles* of the *World*, cutting the *Equator*, (and therefore all its *Parallels*,) at *Right Angles*: And therefore all such *Parallels* do grow lesser towards either *Pole*, decreasing from the *Equator*: As for Instance; 360 *Degrees*, or the whole *Circle* in the *Latitude* of 60 *Degrees*, is but 180 *Degrees* of the *Equator*: Whereas in the *Plain Chart*, that *Parallel*, and all others, are made Equal one to the other, and to the *Equator*.

The *Meridians* in *Mercator's Chart* are also Right Lines, all Parallel one to the other, and cross the *Equator*, and its *Parallels* at *Right-Angles*, as in

the *Plain Chart*. But here, tho' the *Circles of Latitude* are Equal to the *Equinoctial*, yet they keep the same Proportion with the *Meridian*; because the *Degrees* thereon are Lengthen'd, as the same *Parallels* on the *Globe* do Lessen; In the *Plain Chart*, the *Degrees* of the Greater and Lesser *Circles* are Equal; and in this, tho' the *Degrees* of the *Circles of Latitude* are Equal, yet the *Degrees* of the *Meridian* are Unequal, being enlarged from the *Equinoctial* towards either *Pole*, to retain the same Proportion as they do on the *Globe* it self: For, as *Two Degrees* of the *Parallel* of 60 *Deg.* is but *One Degree* of the *Equinoctial*, (or any *Great Circle*;) so here, *Two Degrees* of the *Equinoctial* is Equal but to *One Degree* of the *Meridian* betwixt the *Latitude* of  $59 \frac{1}{2}$  *deg.* and  $60 \frac{1}{2}$  *deg.* and so of the rest. See *Chart*.

The USE of this *Chart*.

I. To find the *Latitude* of any *Place* in the *Chart*.

RULE. Take the nearest *Distance* of the *Place* to any *Parallel*, or *East* and *West* *Line*.

Then lay that *Distance* on the *Graduated Meridian*, setting one *Foot* of the *Compasses* in the said *Parallel*, and turning the other *Foot* the same *Way* the proposed *Place* lies from it; the last *Foot* shews the *Latitude* required.



II. *To find the Longitude of any Place in the Chart.*

R U L E. Take the nearest Distance from the proposed Place to the *Meridian*.

Move the Compasses ( being kept at that distance ) with one Foot on the said *Meridian*, till both Feet come to the *Equator*; and the Foot which stood on the Proposed Place, shews its *Longitude* sought.

III. *To find the Course or Bearing of one Place from another.*

1. If the *Chart* is made with *Rhumb-Lines*, or *Points of the Compass*, drawn in it.

R U L E. Lay a Ruler on the two Places given.

Take the nearest Distance from the Centre of any Compass to the Ruler's Edge.

Move the Compasses, ( being at that Distance, ) with one Foot close to the Ruler, and the other Perpendicular to it: In so moving the Perpendicular Foot, among the *Rhumb-Lines*, will shew the *Course*, or *Bearing*, of the Proposed Places.

2. If the *Chart* have only *Meridians* and *Parallels* drawn thereon.

In such *Charts*, one *Quarter of the Compass* is drawn in one of the *Squares*, and sometimes *Half Points*, and *Quarter Points*:

Whereby the *Course* may be found more accurately than by the *Rhumb-Lines* only, by this

R U L E. Lay a Ruler on the two Proposed Places, keeping it steady there.

Observe ( by the Ruler's Edge ) whether two *Meridians*, or two *Parallels*, are nearest to one another: If two *Parallels* be nearest, the *Course* is Less than *Four Points* from the *Meridian*; but if *Two Meridians*, 'tis More.

Then take the Distance of those which be nearest, and apply it to the *Square*, having Part of the *Compass* in it; setting one Foot in the Centre of the *Compass*, the other being turn'd to the side of the *Square*, will, according to the foresaid Conditions, shew the *Course*, or *Bearing*, required.

IV. *To find the Distance of any two Places on the Chart.*

C A S E 1.

*Two Places under one Meridian, i. e. such as differ only in Latitude; to find their Distance.*

R U L E. Find the *Difference of Latitude* between the given Places; and that will be the *Distance* required.

C A S E 2.

*Two Places under the Equinoctial; to find their Distance.*

R U L E.

**R U L E.** Find the Difference of *Longitude* between them; and that will be the Distance sought.

**C A S E 3.**

*Two Places in one Parallel, i. e. such as Differ only in Longitude, being given; to find their Distance.*

**R U L E.** Take the Distance between the given Places in the *Compasses*.

Lay that Distance on the *Graduated Meridian*, so that one Foot may be as many *Dégrees* above the *Latitude* of the given Places, as the other below it: There stay the *Compasses*.

Count the *Degrees* between the Feet of the *Compasses*; and that will be the Distance required.

**C A S E 4.**

*Two Places Differing in Latitude and Longitude being given; to find their Distance.*

**R U L E.** Take their Difference of *Latitude* from the *Equator*.

Laying a *Ruler* on both given Places, apply that Distance so to the Edge thereof, that when one Foot is placed close to the *Ruler*, and the other turn'd round about, it may just touch some *East* and *West Line* cross'd by the said *Ruler's Edge*: There stay the *Compasses*.

Then the *Distance* (by the *Ruler's Edge*) from the Place where the *Compasses* rested, to that Place where the *Ruler* crosses the aforesaid *East* and *West Line*, measured on the *Equinoctial*, gives the *Distance* required.

**MERCATOR's Sailing.** See *Sailing*.

**MERIDIAN**, is a great Circle passing thro' the *Poles* of the *World*, and both the *Zenith* and *Nadir*; crosses the *Equinoctial* at Right Angles, and divides the *Sphere* equally into a *Western* and *Eastern Hemisphere*; Its *Poles* are the *West* and *East* Points of the *Horizon*: 'Tis call'd *Meridian*; because when the *Sun* comes to that part of this Circle which is above the *Horizon*, 'tis then *Meridies*, *Mid-Day*, or *High-Noon*.

**First MERIDIAN**, is that from whence the *Longitude* is Reckon'd: For the *Meridians* are Various, and Change according to the *Longitudes* of Places; and therefore may be said to be infinite in Number, since all Places from *East* to *West* have their several *Meridians*.

The *French Geographers* and *Hydrographers*, begin to Reckon their *Longitude* from the *West-part* of *Fero*, one of the *Canary Isles*, making the *Meridian* of that Place the *First Meridian*. The *Dutch*, from the *Teneriff*.

*Ptolemy*



*Ptolemy* placed the *First Meridian* One Degree beyond the *Fortunate, or Canary Isles*. After the Discovery of *America*, it was fix'd in *St. Nicolis*, one of the *Cape Virde Isles*, by the *Portugueeze*. *Hondius* placed it at *St. Jago*. *Mercator*, at *Corvo*, one of the *Western Isles*.

So that the *First Meridian* is altogether Arbitrary: And indeed, 'tis enough for all Purposes, if we know the Difference of *Meridians*; which will (or should) be found the same in all Authors. And therefore, every *Astronomer* and *Geographer*, generally makes his own *Meridian* the *First*. But at Sea, we commonly reckon our *Longitude* from the *Meridian* of the Place departed from, or last seen, making that our *First Meridian* till we see another known Land, and no longer.

**MERIDIAN-Altitude**, or *Height of the Sun, or Star*; is the *Altitude* of the *Sun, or Star*, when they are on the *Meridian* of the Place: Or an Arc of the *Meridian* intercepted between the *Horizon* and the *Sun* or *Star*.

**Magnetical MERIDIAN**, is a great Circle which the *Magnetic-Needle*, or the *Needle of the Mariners-Compass*, or the *Meridian of the Compass*, only respects.

**Meridional-Distance**, is the Difference of *Longitude* between the *Meridian* under which the Ship is at present, and any other *Meridian* she was under before.

**Meridional-Parts, Minutes, or Miles**, are the *Parts* by which the *Meridians* in *Wright's* or *Mercator's Chart* do Encrease, as the *Parallels of Latitude* Decrease.

The *Co-Sine* of the *Latitude* of any Place being Equal to the *Semi-diameter, or Radius* of that *Parallel*; Therefore, in *Mercator's*, or the *True Sea-Chart*, this *Radius* being the *Radius* of the *Equinoctial*, or *Sine* of 90 Degrees; the *Meridional Parts* at each Degree of *Latitude* must Encrease, as the *Secants* of the Arc contain'd between the *Latitude* and the *Equinoctial* do Decrease. Therefore these *Meridional Parts* shew how many *Parts* every Degree and *Minute* of *Latitude* is from the *Equator*, that is, of such *Parts* as a Degree of the *Equator* contains 60 of them. And *Tables* of these *Meridional Parts* you have ready Calculated in most Books of the *Piloting Part of Navigation*; they are not only Useful in Working the several Cases in *Mercator's Sailing*, but also, in Making or Graduating *Mercator's Charts*.

**MES**: The Ship's Company is generally divided into several *Messes*, of *Three* or *Six* in a *Mess*; that is, so as their *Victuals* might be the more easily distributed and given out to so many at once, who jointly Diet together; and their Share, or Proportion of *Victuals*, is call'd, a *Mess*.

**MIDDLE-Latitude**. See *Latitude*.  
MIDDLE-

**MIDDLE-LATITUDE-SAILING**, is a Method of Working the several Cases in Sailing, nearly agreeing with Mercator's Way, but without the help of Meridional Parts.

## CASE 1.

Given, Latitudes and Longitudes, of any Two Places ;  
Required, Their Bearing and Distance ?

1. To find the Bearing, or Course, say,

As the Difference of Latitude,  
Is to the Co-Sine of the Middle-Latitude ;  
So is the Difference of Longitude,  
To the Tangent of the Course.

2. To find the Distance, say,

As the Co-Sine of the Course,  
Is to the Radius ;  
So is the Difference of Latitude,  
To the Distance.

## CASE 2.

Given, Latitudes, and Bearings ;  
Required, Difference of Longitude ?

The Proportion is,

As Co Sine of the Middle Latitude,  
Is to the Difference of Latitude ;  
So is the Tangent of the Course,  
To the Difference of Longitude.

## CASE 3.

Given, Latitudes, and Departure ;  
Required, Difference of Longitude ?

Find the Course, by Case 6. of Plain Sailing :

Then find the Difference of Longitude, by Case 2. of this.

## CASE 4.

Given, Latitudes, and Distance ;  
Required, Difference of Longitude ?

1. Find the Course, by Case 5. of Plain-Sailing :

2. Then find the Difference of Longitude, by Case 2. of this.

And after the same manner, all the Common Cases in Mercator's Sailing are wrought.

**MID-SHIP-Beam.** See Beam.

**MID-SHIP-Men**, are Officers on-board a Ship ; their Station, when on their Watch, is some on the Quarter-Deck, others on the Poop, &c. They mind the Braces, Look-out, and give the Word of Command from the Captain, and their Superior Officers : They assist on all Occasions ; both in Stowing and Rummidging the Hold, and Sailing the Ship : They are generally Gentlemen upon their Preferment, having Serv'd the limited Time in the Navy as Volunteers.



MINUTE, or a *Misle*, is the 60 Part of a Degree of a Great Circle.

*Half-Minute-Glasses*, are such as the *Sand Hour-Glasses*, only these run out in *Half a Minute* of Time; and are used in Heaving the Log. See Log.

MISEN, *Misson*, or *Mizen*, is either *Mast*, or *Sail*. See *Mast* and *Sail*.

Note, That at *Sea*, when we use the word *Misen*, we always mean the *Sail*.

The Use of the *Misen*, is to keep the Ship close to a Wind: Wherefore, if a Ship be apt to gripe too-much, they use no *Misen*. But 'tis often used, when a Ship rides at Anchor, to back her a-stern, so that she may not foul her Anchor, on the Turning of the Tide. And sometimes a Ship lies a-Try with her *Misson* only.

*Set the Misen!* That is, Fit the *Misen-Sail* right as it should stand!

*Change the Misen!* That is, Bring the *Misen-Yard* over to the other side of the *Mast*!

*Peek the Misen!* That is, Put the *Misen-Yard* right up and down by the *Mast*!

*Spell the Misen!* That is, Let go the *Shear*, and Peek it up!

*Main-Misen,*  
*Bonaventure-Misen,* } See *Mast*.  
*Misen-Top-Mast.*  
*Misen-Sail.* See *Sail*.  
*Misen-Stay.* See *Stay*.  
*Misen-Yard.* See *Yard*.

MOAR, See *Moor*.

MONSOONS, are Periodical Winds in the *Indian Sea*; that is, Winds that blow for Half the Year one way, and the other Half upon the opposite Points: And those Points, and Times of Shifting, are different, in different Parts of the Ocean. And in some Places, 'tis Constant for Three Months one way, then Three Months more the contrary way, and so all the Year.

MONKS-Seam, is that made by sewing the Edges or Selvedges of the Sails together, one over the other; sewing it both Sides, to make it the stronger.

MOOR; *To Moor a Ship*, is to lay out her Anchors, so as is most convenient for her safe and secure Riding. A Ship is not said to be *Moor'd*, unless she has at least Two Anchors out; except when she is *Moor'd a-Propiso*.

*To Moor a Fair Birth*; that is, in a Place free from any Annoyance.

*To Moor a-Cross*, or *a-Towart*; is to lay one Anchor on one side of the Stream, and the other right against it on the other side; so that they bear equally, as well at *Tide of Ebb*, as at *Flood*.

*To Moor a-Longst*; is to lay an Anchor in the middle of the Stream a-Head, another a-Stern; when 'tis fear'd the Ship may drive a-shore.

To Moor Water-Shot ; is to Moor neither a-Longst nor a-Thwart the Tide, but Quartering between both.

To Moor a-Proviso ; is to have one Anchor out, and a Hawser a-shore ; then the Ship is Moor'd with her Head a Shore. And Two Cables is the least, and Four the best to Moor by.

Mooring for North, West, &c. In an open Road, the Master and Pilots will Moor, or lay out an Anchor on that Point of the Compass they think the Wind is likeliest to endanger the Ship.

MUNITION-Ships, are those which have Stores on-board, for to Supply the Necessaries required by a Fleet of Men of War at Sea,

In Time of an Engagement, all the Munition-Ships and Victualers attending the Fleet are to take their Places and proper Stations in the Rear of all the rest, and not Engage themselves at all in the Fight ; but to attend such Directions as shall be sent unto them, at all times, by the Admiral.

MURDERERS ; are small Pieces of Ordnance, either of Brass or Iron, having Chambers, or Charges, made of Brass or Iron, put in at the Breeches. They are used at the Bulk-heads of the Fore-Castle, Half-Deck, or Steerage, in order to Clear the Deck, when an Enemy Boards the Ship; they are fasten'd, and travers'd, by a Pintle, which is put into a Stock.

## N

NADIR, is that Point in the Heavens, which is Diametrically opposite to the Zenith-Point directly over our Head ; or is the Lower Pole of the Horizon, because distant from it, every way, 90 Degrees.

NAILING of a Gun ; is driving of a Nail, Iron-Spike, or the like, by Force, into the Touch-hole of a Piece of Ordnance, so as to render it useless to the Enemy.

NAILS ; as Tree-Nails. See Tree.

Skupper-NAILS. See Skuppers.

NAVIGATION, is the Art of Conducting a Ship from one Place to another : And may be distinguish'd into Two Parts, viz. the Piloting, and the Working-part.

Piloting-part of Navigation, may be also, either Common, or Proper.

Common Piloting, is Sailing in sight of Land, or Coasting nigh Shore : The Lead, and Compass, with a competent Knowledge of the Lands, are chiefly required for the Performance thereof.

Proper Piloting, gives Directions upon what Course to Steer to any Place desired : As also, when at Sea, shews the Place the Ship is in ; how far she has sailed ; how far she has to sail ; and how all Places bears from her,



her, at any time : And this by means of the *Latitude, Log, and Compass* ; and by the several *Methods of Sailing, as Plain, Wright's, &c.* See *Sailing*.

*Working-part of Navigation*, shews the Method of giving that Noble Fabrick, a *Ship*, all the *Motions and Directions* its cap'ble of, so as to perform the *Navigator's Pleasure*, and be govern'd at his Will, in all Cases.

The *Theory*, (which is the True Foundation of all Practice) of this Part of *Navigation*, as it is more Useful, so it is more Intricate, and has more of Art, than the other Part ; yet 'tis never Taught by any, nor perhaps thought of by many, who Profess the Art. Therefore the *Practice* thereof is usually gain'd at the Expence of the greatest and Choicest part of Man's Time ; and that only by a constant habit of a necessitated Form of Working, without being much beholden to Reason, or its Laws, or any prescribed Rules deduced from them.

Thus, they who would be sufficiently acquainted with the *Practices* at Sea, and Management of a Ship ; must receive their Instructions from our Common Mistress, *Experience*, who teaches Truth, by Tryal, to all alike. So that it would be particularly Advantageous for those Gentlemen that design for the *Sea*, to be perfectly acquainted with the *Theoric-part* ; since it will

lead them directly to, and abundantly shorten the Time of attaining the *Practice*.

NAVIGATORS: By this word is usually meant, Persons capable of Carrying or Guiding a Ship to any Place desired.

NAUTICAL-Chart, or *Planisphere*. See *Chart*.

NAUTICAL-Compass. See *Compass*.

NEALED: If the *Sounding* be *Nealed* to ; that is, if it be Deep-Water, close the Shore ; or if the Lee-shore be Sandy, Clayie, Oasie, or Foul and Rocky-Ground.

NEAP-Tides. See *Tides*.

NEAR! No Near! a Word of Command from him that Con's the Ship, to the Man at Helm, requiring him to let her fall to the Lee-ward.

NEEDLE. See *Magnetic-Needle*.

NETTINGS, are small Ropes seiz'd together Gratingwise with Rope-Yarn, and sometimes made to stretch upon the Ledges from the Mast-Trees to the Roof-Trees, from the Top of the Fore-Castle to the Poop : And sometimes are laid in the Mast of a Ship, to serve instead of *Gratings*.

NETTING-Sail. See *Sail*.

NIPPERS, are small short Ropes, with a little Truck at one end, and sometimes only a Wall-Knot : They serve, to help hold off the Cable from the Main, or Jeer-Capstan, when 'tis so slimy, so wet, or so great, that

that they cannot strain it, to hold it off, with their bare Hands.

**NOCTURNAL**, is an Instrument made of Wood, Ivory, or Brass, divided on both sides: It's Use is, to take the *Altitude* or *Depression* of the *Pole-Star*, in respect to the *Pole* it self; in order to find the *Latitude* of the Place; or making an Estimate, or near Guess at the *Hour of the Night*.

**NORTH**, one of the Four *Cardinal Points* of the *Mariners-Compass*; 'tis generally mark'd with a *Flower-de-Luce*, and is directly opposite to the *South Point*.

**NORTH-Declination**. See *Declination*.

**NORTHERN-Hemisphere**. See *Hemisphere*.

**NORTHERN-Tropic**. See *Tropic*.

**NORTHING**, is the *Difference of Latitude* a Ship makes in Sailing to the *Northward*. See *Difference of Latitude*.

**NORTH-Pole**; a Point in the *Northern-Hemisphere* of the Heavens, 90 *Degrees* every way Distant from the *Equinoctial*.

**NORTH-Star**, or *North-Pole-Star*, is in the Tail of the *Ursa-Minor*; and is so called, as being not above Two *Degrees* and a Half distant from the *Pole*, and seems, to the naked Eye, as if in the same Place.

**NORTHWARD**; that is, towards the *North*.

O

**OAKUM**, as *Okum*, or *Ockham*, are old Ropes Untwisted, and torn in Pieces, and pull'd again out into loose Hemp, like Hurds of Flax; that it may be driven into the *Seams*, *Trennels*, and *Rends* of a Ship, to stop, or prevent a Leak.

**OAR**, is a long Piece of Wood, whose End which is in the Water is made Thin and Broad, for the easie cutting and resisting the Water, and consequently, for moving the Vessel.

**OAZY**, *Oasie-Ground*; that is, Soft, Slimy, or Muddy-Ground: This is no good Anchoring-Ground; because the Anchor here cannot hold firm, but will come home, or give way in stress of Weather; and will also rot the Cables, if a Ship ride long over such Ground: But such Ground is good to bring a Ship a-ground upon, because she can there Dock her self, and lie soft; but yet if she lie long, she will rot her Plank, and spoil the Oakum in her Seams.

**OBLIQUE-Horizon**. See *Horizon*.

**OBLIQUE-Sphere**. See *Sphere*.

**OBSERVATION** of the *Sun*, or *Star*, is usually made when the *Sun* or *Star* is in the *Meridian*; by a *Quadrant*, *Cross-Staff*, or the like



like Instrument, in order to find the *Latitude of the Place*.

To Work an Observation; is, To Find the *Latitude of the Place*, by having the *Sun or Star's Meridian Altitude*, by Observation, and the *Declination* given. It has Two Cases.

CASE 1.

When the Observ'd Object does both *Rise and Set*, and consequently has but One *Meridian Altitude* in the space of 24 Hours.

R U L E

The *Meridian Altitude* and *Declination* of  $\left\{ \begin{array}{l} \text{the same} \\ \text{contrary} \end{array} \right\}$  Kind; the  $\left\{ \begin{array}{l} \text{Difference} \\ \text{Sum} \end{array} \right\}$

of the *Zenith Distance*, and *Declination*, is the *Latitude of Place* sought.

NOTE. 1. Where the *Meridian Altitude* and *Declination* is of the same Kind:

If *Decl.* be  $\left\{ \begin{array}{l} \text{Greater} \\ \text{Less} \end{array} \right\}$  than the *Zenith Dist.*  $\left\{ \begin{array}{l} \text{the same} \\ \text{contrary} \end{array} \right\}$   
The *Latitude* is of

Name to the *Declination*.

2. But where the *Meridian Altitude* and *Declination* is of Different Kind, the *Latitude* is of the same Name with the *Declination*.

CASE 2.

When the Observ'd Object does not *Rise*, or *Set*, and therefore has Two *Meridian Altitudes* in the space of 24 Hours.

R U L E.

The *Observ'd Object* being on the *Merid.*  $\left\{ \begin{array}{l} \text{below} \\ \text{above} \end{array} \right\}$  the *Pole*; The  $\left\{ \begin{array}{l} \text{Sum} \\ \text{Difference} \end{array} \right\}$

of the *Meridian Altitude*, and *Complement* of the *Declination*, is the required *Latitude*, of the same Name with the *Declination*.

OCEAN, [ Gr. *'Ωκεανός*, from *ὠκέω, cito*; and *ναῶν, ἵλυο,*] is that Vast Collection of Salt and Navigable Waters, which Compasses the whole Earth: 'Tis join'd to the *Mediterranean*-

*Sea* by the *Stra't of Gibraltar*; And its several Parts, have Names of Distinction from those of the adjoining *Continents*, or their *Bearing* from them. As,

1. *With respect to EUROPE,*  
*there are,*

The *Hyperborean Ocean*, enclosing *Europe* on the North.

The *Western Ocean*, enclosing *Europe* on the West.

2. *With respect to ASIA,*  
*there are,*

The *Tartarean* and *Chinesean Oceans*, enclosing *Asia* on the North, and East.

The *Indian, Persian, and Arabic Oceans*, enclosing it on the South.

3. *With respect to AFRICA,*  
*there are,*

The *Atlantic*, and *Ethiopic Oceans*, enclosing *Africa* on the West, and South.

The *Oriental Ocean*, on the East.

4. *With respect to AMERICA*  
*there are,*

The *Pacific Ocean*, enclosing *America* on the West.

The *Vast Eastern Ocean*, enclosing it on the East.

But the *Universal Ocean* may more properly be Divided into Three Parts, viz.

1. The *Atlantic* and *Ethiopic Ocean*; lying between *Africa*, and *America*.

2. The *Indian Ocean*; lying between *Africa*, and the *Indian Islands*, and *Hollandia Nova*.

3. The *Great South Sea*, or

the *Pacific Sea*; lying between the *Philippine Isles*, *China*, *Japan*, and *Hollandia Nova* on the West; and the *Coast of America* on the East.

OFFICERS and Offices belonging to *Naval Affairs*, are those that have the Care of Giving Orders and Directions, also, of Providing and Fitting out of Ships, and *Naval Stores*; as those of the *Admiralty*, *Navy-Office*, *Victualling-Office*, *Dock-Yards*, &c. The *Sea-Officers*, are the *Flag-Officers*; as, *Admiral*, *Vice-Admiral*, and *Rear-Admiral*: And other *Commission'd-Officers*, as *Captains*, and *Lieutenants*; with *Warrant-Officers*, as *Master*, *Gun-ner*, *Surgeon*, *Purser*, *Boatswain*, *Carpenter*, *Cook*, &c. And other *Petty Officers*, as *Mates*, *Midship-men*, *Corporal*, *Coxswain*, *Quarteers*, &c. Who have each their several Duties assign'd them, as may be seen, under the Words of their respective Titles.

At each *Dock-Yard* there is a particular *Store-Keeper*, for the Receipt and Issue of all *Naval Stores*: And as other Officers, namely, the *Master-Attendant*, *Master Shipwright*, *Clerks of the Cheque*, and *Survey*, are more or less a Cheque on the said *Store-Keeper*; so is there One of the *Principal Officers & Commissioners of the Navy* particularly Appointed to Reside at, and Inspect into Affairs of the *Principal Yards*; and Another, who Assists at



at the Board in the Navy-Office, is charged with the Examining and Adjusting the Store Keeper's Accounts, as a Second is those of the Treasurer of the Navy, and a Third the Accounts of the Victualing. And as each of the aforesaid Warrant-Officers in the Yards have their particular Duties assign'd them; viz. The Master-Shipwright, in Building of Ships; the Master-Attendant, in the Proportioning Rigging for them, and putting it over Head, laying out Moorings, and removing Ships from one Mooring to another, with several other Services; so are these Clerks of the Cheque Employ'd in the Mustering the Workmen in the Yards, and the Ships Companies within their Reach, and Chequing them out of Wages when Absent: And both They, and the Clerks of the Survey Inspect into all Stores Deliver'd, to see that they Answer to Contract, both in Quantity, and Quality.

Besides these Principal Officers in the Yards, there are Others inferior to them, but All are under the immediate Command of the Commissioners residing on the Place. Those Inferior Officers are Assistants to the Master-Shipwright, Master-Caulker, Master-House-Carpenter, Master-Joiner, Master-Boat-builder, Master-Mast-maker, Fore-man both on Shore, and a-Float, Boatswain of the Yard, Master-Sail-maker, and the like, who have also each of them their particular Duties assign'd,

OFFING, or *Offin*, is an open Sea, a good Distance from the Shore, where there is Deep-Water, and no need of a Pilot to Conduct the Ship into the Port, or Harbour. Also, the Middle-part of any great Stream is call'd *Offing*.

*The Ship stands for the Offing*; that is said of a Ship, seen from Shore, sailing out to Sea-ward.

*The Ship is in the Offing*; that is, She has the Shore near her, and having another a good way without her, or towards the Sea.

OFF-WARD; that is, contrary to the Shore.

*The Ship Heels Off-ward*; that is said of a Ship, that being a-Ground, does *Heel* towards the Water-side.

*The Ship lies with her Stern to the Off-ward, and Head to the Shore-ward*; that is, Her Stern lies towards the Sea, and Head to the Shore.

ORLOPE, in a Three-Deck'd-Ship; the Second, and Lowest Decks, are sometimes call'd *Orlope*. Also, the Spare-Deck in a Great Ship reaching from the Main-mast to the Mizzen.

OVER-Blow; that is, when the Wind blows so very hard, that the Ship can bear no Top-sails.

OVER Grown: When the Waves of the Sea grow high, the Mariners call it *Rough-Sea*; but when the Surges and Billows grow higher, 'then 'tis an *Over-grown-Sea*.

OVER-Hale the Runner. See *Runner*.

OVER-Hale the Sheat. See *Sheat*.

OVER-Rake. See *Rake*.

OVER-Set, or Over-Throw a Ship, is to bring her Keel upwards, either by bearing too-much Sail; or by Grounding her, so that she falls upon one Side.

OUTLICKER, is a small Piece of Timber, made fast to the top of the Poop, and so stands out right a-Stern: At the outmost end thereof there is a Hole, into which the standing part of the Sheat is reev'd thro' the Block of the Sheat; and then again reev'd thro' another Block which is seiz'd close by the end of this *Outlicker*: 'Tis seldom used in great Ship, except the *Mizen-Mast* is placed so far aft, that there is not room enough within board to hale the Sheat flat.

OX-EYE, a Name given by Seamen, to those dreadful Storms, that are sometimes met with on the Coast of *Guinea*; for at first it appears of the Form of an *Ox's-Eye*, and not much bigger; But it descends with such Celerity, that in a very little space, and many times before they can prepare themselves for it, it seems to them to overspread the whole *Hemisphere*; and at the same time, forces the Air with so much Violence, that the Ships are sometimes scatter'd several ways,

sometimes directly contrary, and sometimes are sunk downright.

## P

PANCH, or *Pantch*. See *Paunch*.

PANTER, *Shank-Panter*. See *Shank*.

PARALLELS of *Latitude*, are Circles imagin'd to be drawn Parallel to the *Equator*, thro' every Point of *Latitude*; and therefore are Lesser Circles, consequently a Degree, or the 360th Part of any *Parallel of Latitude*, must be less than an *Equinoctial Degree*, or that of any Great Circle, and that in the same Proportion as the *Radij* of these Circles, that is, as the *Co-Sine* of the *Latitude*, to the *Radius* or *Sine* of 90 *Degrees*.

PARALLEL-Horizon. See *Horizon*.

PARALLEL-Sailing: By *Parallel-Sailing*, is meant, *Sailing* under a *Parallel* of *Latitude*. It has these *Cases*.

## CASE I.

Given, *Difference of Longitude*,  
and *Distance of two Places*  
in the same *Latitude*;  
Requir'd, the *Latitude*?

Proportion:

As the *Difference of Longitude*,  
Is to the *Radius*;  
So is the *Distance*,  
To the *Co-Sine* of the *Latitude*.

## CASE



## C A S E 2.

Given, *The Difference of Longitude between two Places in the same Latitude* ;  
 Requir'd, *Their Distance* ?

Proportion.

*As the Radius,*  
*Is to the Difference of Longit.*  
*So is the Co-Sine of the Lat.*  
*To the Distance.*

## C A S E 3.

Given, *The Distance between two Places in the same Parallel* ;  
 Requir'd, *The Difference of Longitude* ?

Proportion.

*As the Co-Sine of Latitude,*  
*Is to the Distance ;*  
*So is the Radius,*  
*To the Difference of Longitude.*

PARALLEL - Sphere. See Sphere.

PARBUNCLE, is a Rope somewhat like a Pair of Slings ; 'tis seiz'd both Ends together, then put double about any heavy thing that is to be hois'd in, or out of the Ship : By means of this, a full Vessel may be hois'd in, without spilling ; by putting it upon these Ropes set cross-wise, and bringing the Loops over the upper-end of the Cask, then fixing the Tackle to them, the Vessel will stand upright.

PARCEL : *To Parcel a Seam* ; that is, after a *Seam* is Caulk'd, to lay over it a narrow piece

of Canvase, and pour on it hot Pitch and Tar.

PARRELS, are Frames made of Trucks, Ribs, and Ropes, which go round the Masts, and made fast so to the Yards, that they may slip up and down the Masts the easier ; and with the help of the Breast-Ropes, keep the Yards close to the Masts.

PARTNERS, are strong Pieces of Timber, bolted to the Beams, incircling the Masts, to keep them steady in their Steps. These *Partners* are also at the Second Deck, for the same Purpose : But the Mizen-Mast has only one Pair of *Partners* ; and yet that Mast is so firmly wedg'd in them, that it cannot stir, by any means. Tho' some Ships do not sail well, except their Masts be loose, and have leave to play in the *Partners* : Yet, in a *Storm*, this is very Dangerous ; lest the *Partners* should be wrong'd, and forced out of their Places ; for then there is hardly any other Remedy, than Cutting the Mast by the Board.

PASSARADO, is a Rope whereby all the Sheat-Blocks of the Main and Fore-Sails are haled down Aft ; The Clew of the *Main-Sail* to the *Main-Mast*, and the Clew of the *Fore-Sail* to the *Cat-Head*. This is to be done, when the Ship goes large ; and they are also kept down firm, and hindered from flying up, by this *Passarado-Rope*.

PAUNCH, *Pantch*, or *Panch*,  
 Fff 3 are

are broad Clouts woven of Thrums and Sinnets together, to save things from galling and fretting; therefore are made fast to the Main, and Fore-Yards, for that Purpose.

**PAWL**, is a small Piece of Iron bolted to one end of the Beams of the Deck, close by the Capstan, but yet so easily, as that it can turn about. Its Use is, to stop the Capstan from turning back, by being made to catch hold of the *Whelps*.

*Pawling the Capstan.* See *Capstan*.

**PAY**: *To Pay a Seam*; that is, after Caulking, to lay hot Pitch and Tar on, without Canvas. So that,

*Paying a Ship*, is laying a Coat of hot Pitch, or the like, over the Seams of a Ship: And when a Ship is well Caulk'd, and *Pay'd over* with hot Pitch, she is much the lighter for it.

*The Ship is Pay'd*; that is, when in Tacking about, a Ship's Sails being Back-stay'd, fall all flat against the Masts and Shrowds.

*Pay more Cable!* That is, Let out more Cable!

*Pay Cheap!* is a Command, in turning an Anchor out of the Boat, to turn it over-board faster.

**PEEK**, is a Word used at Sea, in these various Sences: As,

*The Anchor is a-Peek*; that is, when a Ship, being about to weigh, comes so over her Anchor, that the Cable is Perpendicular between the Hawse and the Anchor.

*Heaving a-Peek*; is to bring the Ship so as the Anchor may hang *a-Peek*.

*To Ride a-Peek*; that is, when a Ship lies with her Main and Fore-Yards hois'd up, and then having one End of the Yards brought down to the Shrowds, the other is raised up an end: This is done to contrary Sides, that is, the Star-board Yard-Arm of the Main-Yard comes down to the Star-board-Side, and so does the Lar-board-End of the Fore-Yard; so that the Yards appear a-cross each other like *St. Andrew's Cross*. It is perform'd thus; Let go the Starboard Topsail-Sheets from the Main-Yard, and Top-up the Larboard Lifts: And so quite contrary, for the Fore-Yard.

The Use of *Peeking up the Yards*, is, lest lying in a River with the Yards a-cross, another Ship should be foul upon them, and break the Yards.

*To Ride a-broad Peek*, is much after the same manner, only the Yards are rais'd up but half so high.

*Peek the Misen!* See *Misen*.

**PEEK**, also, is a Room in the Hold of a Ship, from the Bits forwards to the Stem.

**PENDANTS**, or *Streamers*, are those long Colours which are hung at the Heads of the Masts, or at the Yard-Arm-ends: Their Use is chiefly for Ornament.

**PENINSULA**, is a Part of the Dry-Land, which is almost an Island, being join'd to the

Con-



Continent by a narrow Neck of Land; as *Fuitland* in Germany, *Morea* in Greece, *Taurica Chersonesus* in Little-Tartary, *Peninsula Indix intra & extra Gangem* in Asia.

**PENNANT**, is a short Rope made fast at one end to the Head of the Mast, or to the Yard-Arm, with a Block at the other end, and a Shiver to reeve some running Rope into: And all the Yard-Arms, except the *Mizen*, have *Pennants*.

**PILLOW**, is that Piece of Timber whereon the Bowsprit rests, at its coming out of the Hull aloft, close by the Stem.

**PILOTS**, are those, who, upon Coasts and Shores unknown to the Masters, are Employ'd to Conduct Ships into Roads or Harbours, or over Bars and Sands, and thro' Intricate Channels, &c. And this they do, by their Knowledge of the true Depth of Water, and Flowings of the Tides, and how they Set from Point to Point, with the Difference of those a-Board from those in the Chanel, or a-Shore; and by the Blowings of the Winds, where the Sands Moveable; and by Land-Marks which they are acquainted withal, when they are to pass thorow any Chanel. And these *Pilots* are seldom Entertain'd whilst Ships are abroad at Sea, or for a whole Voyage; but having done their Parts, they return a-Shore, where they have their Residence, and get their Living in this manner.

**PILOTING** *Part. of Navigation.* See *Navigation*.

**PINK**, is a Vessel Masted and Rigg'd like others; but built with a round Stern, the Bends and Ribs compassing so as the Sides bulge out very much; which renders these sort of Ships very difficult to be Boarded, and to carry greater Burdens than others. They are often used for Store-Ships, Hospital-Ships, or the like.

**PINNACE**, is a Smal Vessel with a Square Stern, going with Sails and Oars, and carrying Three Masts: They are used, as Scouts, for Intelligence, for Landing of Forces, and the like.

**PINNACE**, also, is one of the Boats that belong to Great Ships; they serve for Officers to go ashore, and the like.

**PINTLES**, are the Hooks by which the Rudder hangs to the Stern-Post.

**PIRATS**, are Ships affected to no Party, and respecting Friends and Enemies alike; and therefore Takes either, as they come in their Way: They shew Commissions from contrary Parties, and the Colours of any Nation.

**PITCH**: *The Mast is Pitch'd*; that is, The *Mast* is put and let down into the *Step*.

*The Mast is Pitch'd too-far aft*; that is, The *Mast* is placed too-near the Stern.

*The Ship will Pitch her Masts by the Board*; that is said, when a Ship falls with her Head into the Sea, or beat violently against

the Sea, so as to endanger her Top-Masts.

PLAIN-Charts. See Charts.

PLAIN-Sailing, shews the various Motions of a Ship upon a Plain, where the *Meridians* are all made *Parallel* one to the other; the *Parallels* at Right-Angles to the *Meridians*, and the *Degrees* of each *Parallel* Equal to those of the *Equinoctial*. In which, tho' according to this way of Working, each *Parallel* is falsely supposed Equal to the *Equinoctial*, and the *Terraqueous* Globe as falsely to be Plain and Flat; yet if a Ship sail under, or near the *Equinoctial*, or *Meridian*, a short Voyage, or a long one cut into many short ones, may indifferently be perform'd by it.

The several Cases in *Plain-Sailing*, with their *Solutions*, are as follow :

#### CASE I.

Given, *Course* and *Distance* run;

Requir'd, *Departure*, and *Difference of Latitude*?

*Proportion.*

1. As the *Radius*,  
To the *Distance* run;  
So is the *Sine* of the *Course*,  
To the *Departure*.
2. As the *Radius*,  
To the *Distance* run;  
So is *Co-Sine* of the *Course*,  
To the *Difference of Latitude*.

#### CASE 2.

Given, *Course* and *Departure*;  
Requir'd, *Distance* and *Difference of Latitude*.

*Proportion.*

1. As the *Sine* of the *Course*,  
To the *Departure*;  
So is the *Radius*,  
To the *Distance*.
2. As the *Sine* of the *Course*,  
To the *Departure*;  
So is *Co-Sine* of the *Course*,  
To the *Difference of Lat.*

#### CASE 3.

Given, *Course* and *Difference of Latitude*?

Requir'd, *Distance*, and *Departure*?

*Proportion.*

1. As *Co-Sine* of the *Course*,  
To the *Difference of Lat.*  
So is the *Radius*  
To the *Distance*.
2. As *Co-Sine* of the *Course*,  
To the *Difference of Lat.*  
So is the *Sine* of the *Course*,  
To the *Departure*.

#### CASE 4.

Given, *Distance*, and *Departure*;

Requir'd, *Course*, and *Difference of Latitude*?

*Proportion.*

1. As the *Distance* run,  
To the *Radius*;  
So is the *Departure*,  
To the *Sine* of the *Course*.



2. As the Radius,  
To the Distance run ;  
So Co-Sine of the Course,  
To Difference of Latitude.

## C A S E 5.

Given, *Distance, and Difference of Latitude.*

Requir'd, *Course, and Departure ?*

*Proportion.*

1. As the Distance run,  
To the Radius ;  
So is Difference of Latitude,  
To Co-Sine of the Course.
2. As the Radius,  
To the Distance run ;  
So is the Sine of the Course,  
To the Departure.

## C A S E 6.

Given, *Difference of Latitude, and Departure,*

Required, *Course, and Distance ?*

1. As the Difference of Lat.  
To the Radius ;  
So is the Departure,  
To the Tangent of the Course.
2. As Sine of the Course,  
To the Departure ;  
So is the Radius,  
To the Distance run.

PLAIN-SCALE. See *Scale.*

PLANKS, are those Timbers which go Fore and Aft on each Side of the Ship, whereon lie the Beams of the First Orlop.

Garboard-PLANK. See *Garboard.*

PLATFORM, is a Place on the Lower-Deck of a Man of War, abaft the Mainmast, between it and the Cockpit.

PLAT, are flat Ropes made of Rope-Yarn, and weav'd one over the other : They serve to save the Cable from galling in the Hawse, or to wind about the Flocks of the Anchors, to save the Pennant of the Fore-Sheat from galling against them.

PLOW, is an Instrument made commonly of Box, or Pear-Tree ; for the Taking of the *Sun*, or *Star's Height*, in order to find the *Latitude of the Place* : It admits of large Graduations ; and is esteem'd of, by some Artists.

PLUMMET. See *Lead.*

POINT of the *Compass*, is the 32<sup>d</sup> Part of the Circumference of the Circle on the *Card*, or 11 Degrees, 15 Minutes : Therefore,

*Half a Point*, is 5 Degrees, 37 Minutes.

*Quarter-Point*, is 2 Degrees, 48 Minutes.

POINT of *Land*. See *Premontory.*

POINT of *Traverse* ; To *Cast a Point of Traverse*. See *Cast.*

POINTING the *Cable* ; is untwisting it at the End, and lessening the Yarn, and twisting them again, and making all fast with a Piece of Marline : This is done, in order to keep the Cable from raveling out ; as also,

also, that none of it may be cut off.

**POLES** of the World are two Points, 90 Degrees each distant from the *Equinoctial*: They are the two Extremities of the *Axis*, (or that Imaginary Line which is supposed to pass thro' the Centre of the *Globe*, and upon which the whole is conceiv'd to turn round;) one wh<sup>ch</sup> of is call'd the *North*, or *Arctic*; and the other, the *South*, or *Antarctic Pole*. They are call'd *Poles*, from Πόλις, (*Verto*;) for upon them, the whole Frame of the *Globe* turns about.

*Arctic*, or *North Pole*, is so term'd, from ἀρκίον, signifying a *Bear*; because so very near a noted *Star* in the Constellation call'd the *Little Bear*.

*Antarctic*, or *South Pole*, is the *South Point*; and is so call'd, from ἀντι, (*contra*;) and ἀρκίον, (*Ursa*;) because of its being Diametrically opposite to the other.

**POOP** of a Ship, is the Highest, or Uppermost Part of her Hull at the Stern.

**PORT!** or, *Port the Helm!* is a Word of Command to him at the *Helm*, to put it to *Starboard*, and the Ship will go to *Starboard*. See *Helm*.

The Ship Heels a-Port. See *Heel*.

**PORT**, is also a *Haven*, or *Harbour*. And,

**PORTS**, are those Holes in a Ship's Side, thro' which the *Great Guns* are put out.

**PORT-Last**; the same with the *Gunwail* of a Ship.

The *Yard* is down a-Port-Last, when it lies down on the *Deck*.

**PORT-Ropes**. See *Ropes*.

**PORTOISE**; To Ride a-Portoise. See *Ride*.

**PORT**; *Sally-Port*. See *Sally*.

**POWCHES**, are small Bulkheads, made in the *Hold* of the Ship, to stow Goods, that they may not shoot from one side to the other.

**POWDER-ROOM**, is that part of the *Hold*, wherein the *Powder* is stow'd.

**PREDY the Ship!** That is, Make Ready to set *Sail!* or to *Fight!*

*Predy the Hold!* That is, Lay, or Stow every thing there in its *Due Order*, and *Proper Place*.

**PRESS**, or *Pressing*. See, *To Man a Fleet*.

**PREST-SAILS**; as, *To Carry a Prest-Sail*; that is, The Ship carries all the *Sail* she can croud: This is sometimes practis'd by Ships, upon Sight of an *Enemy*, whom they think they are not able to *Encounter*. But carrying too much *Sail*, if it Blow, may prove of ill *Consequence*, as the hazard of *Over-setting* the Ship; or endangering the *Mast*, and *Yards*: For if any of them come by the *Board*, the *Enemy* can lie upon the *Bow*, *Counter*, or *Thwart* one's *Hawse*, and *Rake* one *Fore* and *Aft* at his *Pleasure*. So that Meeting an *Enemy*, in such a *Case*,



Case, 'tis most rational to go away with an *easie Sail*, and make a Running Fight, till Night favour an Escape.

PREVENTER - ROPE. See *Rope*.

PROMONTORY, is a High Part of a Land, stretching it self into the Sea; its Extremity is usually call'd a *Cape*, or *Head-Land*.

In EUROPE, the Chief Promontories, or Head-Lands, are,

*Cape St. Vincent*, *Cape Finister*, *Cape Roxant*, Extending from the West of Spain.

*Cape La-Hogue*, Extending from the North of France.

*Cape North*, Extending from the Northmost part of Norway.

The *Lands-End*, Extending from the South west of England.

The *Lizard*, and *Start-Point*, Extending from the South of England.

In ASIA, the Chief Promontories, or Head-Lands, are,

*Cape Sumer*, Extending from the East of China.

*Cape Corin*, Extending from *Penin. Indiae inter Gangem*.

*Cape Razalgate*, Extending from the South-East-part of Arabia.

In AFRICA, the Chief Head-Lands, are,

*Cape Gardesuir*, Extending

from the North-East-part of *Ethiopia Exterior*.

*Cape de Bonne Esperance*, Extending from the South of *Ethiopia Exterior*.

*Cape de Verde*, Extending from the West of *Negroland*.

*Cape Spartel*, Extending from the West of *Barbary*.

In AMERICA, the Chief Head-Lands, are,

*Cape Horn*, Extending from the South of *Terra del Fuego*.

*Cape Frio*, *Cape St. Augustine*, Extending from the East of *Brazil*.

*Cape de Coriente*, Extending from the West of *New-spain*.

*Cape Florida*, Extending from the South of *Florida*.

PROPER PILOTING. See *Navigation*.

PROVISO; *To Moor a-Proviso*. See *Moor*.

PROW, is properly the Head of the Ship.

PUDDINGS, are Ropes nail'd to the Arms of the *Main* and *Fore-Yards*, near the Ends, at some Distances from one another. Their Use is, to save the *Robbins* from galling, or wearing asunder upon the Yards, when the *Top-sails* are haled Home.

*Pudding of the Anchor*, are those Ropes which are wound about the Rings of the Anchors; to save the Clinch of the Cable from being galled by the Iron.

PULLET,

**PULLET**, is a Room within the Hold, in which Pigs of Lead, or the like weighty things, are put, that the Ship may be sufficiently Ballasted, with the loss of little Room.

**PUMPS**, used at Sea, are of several sorts; as some have such as those a-Shore, standing by, or near the Main-Mast.

**Chain-PUMPS**, are those used in great Ships; they go with more Ease, and yield more Water than the Ordinary Pumps; and are sooner mended.

**BARE-PUMP**, is made of a Cane, or a Piece of Hollow Wood, or the like: 'Tis used, for to Pump Beer, or Water, out of the Casks.

**BUR-PUMPS**, are those used commonly by the Dutch, who have them by their Ships-sides; in these there is a long Staff, with a *Bur* at the End like a Gunner's Sponge, to Pump up the Bilge-Water.

In *Pumping*, 'tis usual to make *Spells*, that is, to relieve the Men with fresh ones, and count how many Strokes they Pump each Watch, and by that means know if the Ship be Stanch, or how her Leaks encrease.

**BILGE-PUMP**. See *Bilge*.

**PUMP'S-CAN**, is the *Bucket* whereby they pour Water into the Pump, to fetch it, and make it work, when 'tis to be used.

**PUMP'S VALE**, is the *Trough* by which the Water runs from the Pump, along the Ship's-sides,

that it may go out at the *Scupper-holes*.

**PUMP'S-BRAKE**, is the *Hard'e* of the Pump.

*The Pump Sucks*; that is, when the Water being out, draws up nothing, but Froth, and Wind.

**PURCHASE**, signifies only to draw in: As,

*The Capstan Purchases a-pace*; that is, draws the Cable in a-pace.

*The Tackle will not Purchase*; that is, when they cannot draw, or hale in any thing, with the Tackle.

**PURSER** of a *Man of War*, is an Officer, who has the Charge of the Victuals, receives it, takes care that it be in good Condition, and well lay'd, and stow'd up: He keeps a *List* of the Ship's Company, and sets down exactly the Days of each Man's Admittance into Pay, &c.

**PUTTOCKS**, or *Puttock-Shrouds*, are small *Shrouds* which go from the throe of the Main-Mast, Fore-Mast, and Mizen-Mast, to the Round-Top of those Masts; for where the *Shrouds* come near the Top, they fall in so much, that One could not get into the Top, without the help of the *Puttocks*. And if there be any Top-Gallant-masts to the Top-masts, there are *Puttocks* to go from the Top-mast-Shrouds to those: These *Puttocks* at the Bottom are seiz'd to a Staff, or to some Rope which is seiz'd to



to a Plate of Iron, or to a *Dead-man's-Eye*, to which the *Lanterns* of the Fore-mast-Shrouds do come.

Q

**Q**UADRANT, *Sea-Quadrant*, or *Davis's-Quadrant*, is an Instrument contriv'd very commodiously; and at this time, is the most approv'd One, for Observing the *Sun's Meridian Altitude*, at Sea.

These *Quadrants* are made of any Length between 18 Inches and 3 Feet; but now they are generally made of 26 Inches *Radius*, with one Arch 65 Degrees, the other 25 Degrees; and a Glass to the *Shadow-Vane*.

The Principal Parts are Three *Vanes*, the *Horizon*, *Shadow*, and *Sight-Vane*: And Two *Arches*; on which *Arches* are the Degrees, both together making 90 Degrees; from whence 'tis call'd a *Quadrant*.

The *Horizon-Vane*, respects the *Horizon*, in time of Observing.

The *Shadow-Vane*, is that which gives the *Shadow*, and is placed on the *Sixty Arch*.

The *Sight-Vane*, is that thro' which you are to look for both *Shadow* and *Horizon*: 'Tis placed on the *Thirty Arch*.

The *Sixty Arch*, is that with the Shortest *Radius*; so call'd, because formerly 'twas divided into 60 Degrees: but now it often contains 65, or 70 Degrees.

This Arch is of a Small *Radius*; and is so design'd, that the *Shade-Vane* used on it, being at so small a Distance from the *Horizon Vane*, on which its *Shadow* (in time of Observing) is to fall, might be more Visible to the Eye of the Observer.

The *Thirty Arch*, is of a Large *Radius*, that it might contain the Lesser Sub-divisions of a Degree; and being of a competent Breadth, thereon usually are describ'd 10 *Concentric Circle*, intersected with 3 *Diagonal Lines* in each *Degree*, making each Intersection 2 *Minutes*. The Limb of this Arch is divided into *Degrees* by long *Strokes*; each again subdivided into Six Equal Parts: Therefore each small Division is 10 *Minutes*.

The Use of the QUADRANT.

This Instrument is seldom used, otherwise than to Observe the *Sun's Meridian Altitude*; which is perform'd thus:

1. Put the *Horizon-Vane* in its proper Place, close home to the Centre of the *Quadrant*: Put the *Sight Vane* on the *Thirty Arch*, close to the Back of it: And the *Shade-Vane* on the *Sixty Arch*, close to the Back of it; set the upper Edge of this *Vane* to a Number of Degrees less than the Complement of the *Altitude* by 15 or 20 Degrees.

2. The *Vanes* being thus fix'd upon the *Quadrant*, turning your Back towards the Sun, and holding the *Quadrant* as upright

as you can, look thro' the *Sight-Vane*, and bring the upper Edge of the Shadow of the *Shade Vane* to lie upon the upper Edge of the Slit in the *Horizon-Vane*; at the same time, if the *Horizon* appear thro' the said Slit in the *Horizon-Vane*, the *Vanes* on the *Quadrant* stands at the *Sun's present-Altitude*.

3. But if the *Sky* appear, instead of the *Horizon*, slide the *Sight-Vane* a little higher: On the contrary, if the *Sea* appear instead of the *Horizon*, then slide the *Sight Vane* lower; continue so to do, till the *Horizon* appear thro' the *Horizon-Vane*.

4. In order to obtain the *Meridian Altitude*, continue Observing; as the *Sun* rises, the *Sea* will appear thro' the *Horizon-Vane*, therefore slide the *Sight-Vane* down lower accordingly: Thus do, Observing as often as may be convenient, till the *Sun* is at the Highest.

5. When the *Sun* begins to fall, the *Sky* will appear thro' the *Horizon-Vane*, instead of the *Horizon*, then desist Observing for that Day.

6. Having thus done, add the Degrees the Upper-Edge of the *Shade Vane* stands at, to the Degrees and Minutes cut by the Inside of the *Sight Vane*; their Sum is the *Complement of the Sun's Altitude*, or the *Distance* of the Upper Edge of the *Sun* from the *Zenith*: To which add 16 *Min.* the *Sun's Semi-Diameter*; and you'll have the *Distance* of the

*Sun's Centre* from the *Zenith*, being the true *Complement* of the *Sun's Meridian Altitude*.

For the Upper-Edge of the Shadow of the *Shade-Vane* respects the Upper-Limb of the *Sun*; and the Lower-Edge of the said Shadow, answers to the Lower-Limb of the *Sun*: So that Observing by the first, you are to Add 16 *Min.* to what is on the *Quadrant*; but Observing by the latter, Subtract 16 *Min.* from it; the *Sum*, or *Difference*, is the *Zenith Distance*; that is, the *Distance* of the *Sun's Centre* from the *Zenith*, or the *Complement* of his *Meridian Height*.

But by having a *Convex-Glass* put in the Middle of the Breadth of the *Shade-Vane*, which, in time of Observing, casts an illuminated Spot on a round black Spot made in the *Horizon-Vane*, there will be no occasion of making that Allowance in Adding or Subtracting 16 *Min.* Only setting that Part of the *Shade-Vane* which is right-against the Middle, or Centre of the *Glass*, to the Degrees in the *Sixty Arch*; and then cause the Enlighten'd Spot of the *Glass* to lie on the Black Spot, or Circle on the *Horizon-Vane*; at the same time look for the *Horizon* thro' it, as before Directed, so will you have (Observing by this *Glass* in the *Vane*) the true *Complement* of the *Sun's Altitude*, or the *Distance* of his *Centre* from the *Zenith*.

Besides,



Besides, this *Glass-Vane* is Useful, when the Edge of the Shadow of the *Shade Vane* is not Conspicuous, as in Hazy-Weather; yet the Glass may collect so much of the *Sun's Beams*, as will cast an apparent Brightness upon the *Horizon-Vane*.

*Sinical* - QUADRANT. See *Sinical*.

QUARTER-Deck. See *Deck*.

QUARTER-Masters, or *Quartermasters*, are Ship-Officers, whose Business is Rummidging, Stowing, and Trimming the Ship, in the Hold; to Over-look the *Steward*, in his Delivery of Victuals to the *Cook*; and in Pumping, and drawing out Beer, or the like: They also are to keep their Watch duly, in Conding the Ship, or any other Duty.

QUARTER of a Ship, is that Part of the Ship's Hull which lies from the Steerage Room to the Transom.

*Fat*-QUARTER. See *Fat*.

*Close*-QUARTERS, are where the Seamen *quarter* themselves, in case of Boarding, for their own Defence, and for Clearing the Decks, &c.

QUARTER-POINT. See *Point*.

QUARTER, signifies also, a good Treatment given to an Enemy Taken: As, *The Enemy asked Quarter. We gave no Quarter*; and the like.

QUARTERING; *The Ship*

goes *Quartering*; that is, She goes upon a *Quarter-Wind*; or, She goes neither by a Wind, nor before the Wind, but betwixt both.

QUARTER-Wind; is when the Wind comes in, abaft the Main-Mast-Shrouds, even with the *Quarter*.

QUARTERING the Men; to Dispose of the Ship's Company so at the Time of an Engagement, as each may readily know where his Station is, and what he's to do: As, some to the *Master*, for the Management of the Sails; some to assist the *Gunners* to Traverse the Ordnance; some for Plying of the *Small-Shot*; some to fill Powder in the *Powder-Room*; others to carry it from thence to the *Gunners*, in *Cartherages*, &c.

QUOIL, or *Coile*, is a Rope, or Cable, laid up round, one Fack (or Turn) over another, so that they may the more easily be Stow'd out of the way, and also run out free and smooth, without *Kencks*, that is, without Twistings or Doubings; then the Cable is said to be *Quoil'd* up.

*Weather-Quoil*, or *Coil*. See *Weather*.

QUOINS; the same with *Coins*: Which see.

*Canting* and *Standing-Quins*. See *Coins*.

## R

**RABBETING**, is the Letting-in of the Planks of the Ship into the Keel, which, in the Rake and Run of a Ship, is hollow'd away; that the Planks may Join the better, and closer.

**RABBIT** of the Keel, that is, the Hollowing there.

**RAG-BOLTS.** See *Bolts*.

**RAINS**; that Tract of Sea, to the Northwards of the *Equator*, between Four and Ten Degrees of *Latitude*, lying between the Meridians of *Cape Verde*, and of the Easternmost Island of that Name, is usually call'd, by our *Navigators*, the *Rains*: For it seems to be a Place condemn'd to Perpetual *Calms*, and, in a manner, constant *Rains*, with *Thunder* and *Lightning*, after an extraordinary manner; the little Winds that are only some sudden uncertain Gusts, of very small Continuance, and less Extent; so that sometimes each Hour you shall have a different Gale, which vanishes away into a *Calm*, before another succeeds: And here, a Fleet of Ships in sight of one another, shall have each a Wind from different Points of the *Compass*; with these weak Breezes, Ships are obliged to make the best of their Way to the *Southward*, thorow these Six Degrees.

And the *Atlantic Ocean* near the

*Equator*, is very much subject to, nay, is always attended with these *Calms*; into which Ships frequently fall, and there detain'd (as 'tis reported) whole Months, for want of Wind.

**RAKE** of a Ship, is so much of her Hull as hangs over both ends of her Keel.

*Fore-Rake*, or *Rake-forward*, is that Part of it which is Before; and is usually more than a Third, but less than Half the Length of the Keel; a *Long Rake-forward* gives the Ship a good Way; But then, if she has not a Full Bow, 'twill make her apt to pitch much a-head into the Sea; besides, is a great Charge and Stress to a Ship, because she hangs over so a-head. But when a Ship has a *Small Rake forward*, she is so Bluff-headed, that the Sea meets her so often upon the Bow, that she cannot cut the Water so readily, and consequently, will make but small Way.

*Rake-aft*, or *Rake-aftward*, is that Part which is at the setting on of the Stern-Post; and is generally about a Fourth or a Fifth of her *Fore-Rake*.

*The Ship Rakes so much Forward*, or *Aftward*; that is, her *Rake* is so much Forward, or Hindward.

**RAKE** of the Rudder. See *Rudder*.

**RAM'S-HEAD**, in a Ship, is a great Block, belonging to the Fore and Main-Halliards; it has  
in



in it three Shivers, into which the Halliards are put; and at the End of it, in a Hole, are reev'd the *Ties*.

RANGES, in a *Ship*, are two Pieces of Timber going a-cross from Side to Side: One aloft on the Fore-Castle, a little abaft the Fore-Mast; 'tis fasten'd into the Timbers of the Ship's-Sides; and has two Knees about the Middle, on either side of the Fore-Mast, fasten'd to the Deck and the Timber, in which the Top-sail-Shears run in a Shiver: There are in it also, several Wooden Pins, to belay the Fore-Bow-Line, the Fore-Tack, and the Fore-Loof-Hook.

The other *Range* is in the Beak-head, before the Woublings of the Bowsprit: It lies in the Form of the other, and has the Spritsail, and Spritsail-Top-sail-Shears and Ropes belay'd about its Pins.

RANK-Keel. See *Keel*.

RAT; is a Place in the Sea, where there are Rapid Streams, and Dangerous Currents, or Counter-Currents.

RATE of *Ships*, is the Distinction of the Bigness and Capacity of Ships of War, which is into Six: The Difference is usually reckon'd by the *Length* and *Breadth* of the *Gun-Deck*; *Number* of *Tuns* they contain; *Number* of *Men*, and *Guns*, they carry.

RATE *First*, have their *Gun-Decks* from 159, to 174 Feet

Long; and from 44, to 50 Feet Broad.

They Contain from 1313, to 1882 *Tuns*.

They Carry from 706, to 800 *Men*:

And from 96, to 110 *Guns*.

RATE *Second*, have their *Gun-Decks* from 153, to 165 Feet Long; and from 41, to 46 Feet Broad.

They contain from 1086, to 1482 *Tuns*.

They Carry from 524, to 640 *Men*:

And from 84, to 90 *Guns*.

RATE *Third*, have their *Gun-Decks* from 142, to 158 Feet Long; and from 37, to 42 Feet Broad.

They Contain from 871, to 1262 *Tuns*.

They Carry from 389, to 476 *Men*:

And from 64, to 80 *Guns*.

RATE *Fourth*, have their *Gun-Decks* from 118, to 146 Feet Long; and from 29, to 38 Feet Broad.

They Contain from 448, to 915 *Tuns*.

They Carry from 226, to 346 *Men*:

And from 48, to 60 *Guns*.

RATE *Fifth*, have their *Gun-Decks* from 100, to 120 Feet Long; and from 24, to 31 Feet Broad.

They Contain from 259; to 542 *Tuns*.

They Carry from 45, to 190 *Men* :

And from 26, to 44 *Guns*.

*RATE Sixth*, have their *Gun-Decks* from 87, to 95 *Feet* Long; and from 22, to 25 *Feet* Broad.

They Contain from 152, to 256 *Tuns*.

They Carry from 50, to 110 *Men* :

And from 16, to 24 *Guns*.

*RATIONAL-Horizon*. See *Horizon*.

*RAT-LINES*, or *Ratlings*, are those *Lines* which make the *Ladder-Steps*, to get up the *Shrowds*, and *Puttocks*.

*REACH*, is the *Distance* between any two *Points* of *Land*, that lie in a *Right-Line* one from the other.

*Fore-REACH*. See *Fore*.

*REAL-Horizon*. See *Horizon*.

*REAR-ADMIRAL*. See *Officers*, and *Flag-Officers*.

*REARED*, *Wale-Reared*. See *Wale*.

*RECTIFIER*, is an *Instrument* consisting of two *Parts*, which are two *Circles*, either laid upon, or let into the other, and fasten'd together in their *Centres*; they represent two *Compasses*, one *Fix'd*, the other *Moveable*, each *Divided* into the 32 *Points* of the *Compass*, and 360 *Degrees*; and *Numbred* both *Ways*, from the *North*

and the *South*, ending at the *East* and the *West*, in 90 *Degrees*.

The *Fixed Compass*, represents the *Horizon*; in which, all the *Points* of the *Compass* are *Fix'd*, and *Immoveable*.

The *Moveable Compass*, represents the *Mariners Compass*, as liable to *Variation*. In the *Centre* of the *Moveable Compass*, is fasten'd a *Third*, or sometimes an *Index*, long enough to reach the *Outside* of the *Fix'd Compass*. This *Instrument* serves to find the *Variation* of the *Magnetic-Compass*, and to *Rectifie* the *Course* at *Sea*; having given, the *Sun's Amplitude*, or *Azimuth*.

*REEF*: When there is a great *Gale* of *Wind*, they commonly roll up part of the *Sail* below; so by that means it may become the narrower, and therefore not draw too much *Wind*. This *Contracting*, or *Taking up* of the *Sail*, is call'd *Reef*, or *Reefing*.

*REEFT Top-Mast*: When a *Top-Mast* is *sprung*, that is, crack'd, or almost broken in the *Cap*, they cut off the lower *Piece* that was near broken off; and setting the other *Part*, now much shorter, in the *Step* again, they call it a *Reeft Top-Mast*.

*REEVE*; is to draw a *Rope* thorow a *Block*, to run up and down.

To *Unreeve* a *Rope*, is to pull a *Rope* out of a *Block*.



**REFLUX** of the Sea, is the Ebbing of the Water off from the Shore: As its coming on upon it, or *Tide of Flood*, is call'd, the *Flux of the Sea*. See *Tide*.

**RENDS** in a Ship; are the same as *Seams* between the Planks. See *Seams*.

**RESERVE.** See *Engagement*.

**RESOLVE** a *Traverse*. See *Traverse*.

**RIBS** of a Ship, are the Timbers of the Futtock, when the Planks are off; so call'd, because they are Bending like the *Ribs* of a Carkass.

Also, those little long Wooden Pieces which belong to the *Parrels* of the Yards, and have Holes in them, like the Comb under the Beak-head, are call'd, the *Ribs* of the *Parrels*.

**RIDE**: A Ship is said to *Ride*, when her Anchors hold her fast, so that she drives not, by the force of the Wind, or Tide. And a Ship is said to

*RIDE-well*, when she is built so, that she does not over-beat her self into a-Head-Sea, as that the Waves Over-Rake her, that is, Over-Wash her) from Stern to Stern.

*RIDE-a-cross*, when she *Rides* with her Main-Yards and Fore-Yards hoisted up to the Hounds; and both Yards and Arms Top'd alike.

*RIDE-a-Peck.* See *Peck*.

*RIDE-a-shwart*, is to *Ride*

with her Side to the Tide; and then she never strains her Cable.

*RIDE betwixt Wind and Tide*, is to *Ride* so as the Wind has equal force over her one way, and the Tide the contrary way; which makes a Ship roll and tumble very much, yet not strain her Cables much.

*RIDE-Wind-Road*, or, *To Ride a great Road*; that is, to *Ride* so as the Wind has more Power over the Ship, than the *Tide*.

*RIDE Hawssful*, or, *To Ride a-Stress*; that is, when in a Stress of Weather, the Ship falls deep into the Sea with her Head, that the Water runs in at her Hawsses.

*RIDE Land-Lock'd.* See *Land-Lock'd*.

*RIDE a-Portoise*, is when the Yards of a Ship are struck down upon the Deck; or when they are down a-Port-Lust.

*RIDE by the Stoppers.* See *Stoppers*.

**RIDERS**, are great Timbers, both in the Hold, and aloft, which are bolted on to the other Timbers, to strengthen them, when 'tis discover'd a Ship is too weak or slightly Built.

**RIGGING** of a Ship, is all the Cordage or Ropes whatsoever belonging to her Masts, or Yards, or any Part about her.

*The Ship is well-Rigg'd*; that is, when she has all her Ropes of fit Size and Proportion to her Burden.

*The Ship is Over-Rigg'd* ; that is, when her Ropes are too many, or too great for her ; which wrongs her much in her Sailing, and is apt to make her Heel : For a small Weight Aloft, beyond due Proportion, is more prejudicial than a much greater Below ; and the more Upright any Ship goes, the better the Sails.

RIGHT the *Helm* ! That is, Keep the *Helm* even with the Middle of the Ship ! See *Helm*.

RIGHT-*Horizon*. See *Horizon*.

RIGHT-*Sphere*. See *Sphere*.

RIGHT-*Sailing*, is when a Voyage is perform'd on some one of the Four *Cardinal Points*.

If a Ship sails on the *North*, or *South* Points, that is, under the *Meridian*, she Varies not in Longitude at all ; but only changes the Latitude, and that just so much as the Number of Degrees she has run.

If a Ship sails directly *East*, or *West*, she alters not her Latitude, but only Longitude ; and that as the Co-Sine of the Latitude is to the Sine of 90 Degrees.

RING-*Bolts*. See *Bolts*.

RISING-*Timbers*. See *Timbers*.

RISINGS in a *Ship*, are those thick Planks which go fore and aft, on both Sides, under the Ends of the Beams and Timbers of the Second Deck, unto the Third Deck, Half-Deck, and Quarter-Deck ; and on them the Beams and Timbers of the Deck

do bear, at both Ends, by the Ship's Side.

ROAD, is any Place near the Land, where Ships may Ride at Anchor.

ROADER, is a Ship that Rides in a *Road*.

ROARING of the *Sea*, is the Noise that attends its Agitation : And this *Roaring* is frequently observ'd a-Shore, both before and after a Storm.

ROBBINS, in a *Ship*, are those small Lines which make the Sail fast to the Yards, being reev'd into Eyelet-holes in the Sail, under the Head-Ropes, for that Purpose.

ROOF-*Trees*, or *Ruff-Trees*. See *Trees*.

ROOM, in a *Ship* ; are Places distinguish'd by Partitions, or Bulk-heads : As the

*Gun-Room*, is an Apartment abaft, under the Great-Cabbin, where the Gunner and his Crew prepare all their Necessaries, and is their proper Place of Rendezvous.

*Bread-Room*, lies under the *Gun-Room* : Here the Bread is kept, and preserv'd Safe, and Dry.

*Cook-Room*, is in the Fore-Castle : Here the Victuals are Dress'd.

*Powder-Room*, lies near the *Bread-Room*, and serves as a Magazine for the Powder.

ROOMY, a *Roomy Ship* ; that is, so Spacious, that Men may pass with Ease to and fro.



ROPES of a *Ship*, are in general all her Cordage; but at Sea they call by this Name only, the

BOAT-ROPE, that which the Ship Tows her Boat by, at her Stern.

BOLT-ROPE, wherein the Sails are Sew'd.

BREAST-ROPE, is that which serves to keep the Yards close to the Masts, or to lash the Parrels to the Masts.

BUCKET-ROPE: That which is tyed to the Bucket for drawing of Water in.

BUOY-ROPE: That which is tyed to the *Buoy* by one End, and the Anchor's Flook by the other End.

CAT-ROPE, is that used to hale up the *Cat*.

CHEST ROPE, *Guest-Rope*, or *Gist-Rope*, is a Rope aded to the *Boat-Rope* when she is tow'd to the Ship's Stern, to keep her from shearing, that is, from swinging to and again.

ENTRING-ROPE, is tyed by the Ship's Side, for one to hold by that goes up the *Entring-Ladder*.

JEEER-ROPE, is a Piece of a Hawser made fast to the Main-Yard; another to the Fore-Yard close to the Ties, reev'd thro' the Block which is seiz'd close to the Top, and so comes down by the Mast, and is reev'd thro' another Block at the Bottom of the Mast close by the Deck. Its Use is to succour the Ties, by helping to hoise

up the Yards; so that tho' the Ties should break, yet they would hold up the Mast.

KEEL-ROPE, is a *Hair-Rope*, running between the Keelson and the Keel of a Ship, to clear the Limber-Ho'es, when they are choak'd up with Ballast, and the like.

PORT-ROPES, are those made use of to hale up the Ports of the Ordnance.

PREVENTER-ROPE, is a *Small Rope*, seiz'd cross over the Ties, close to the Ram head; so that if one Part of the Tie should break, yet the remaining Part should not run thro' the Ram-head, and endanger the Yard.

RUDDER-ROPE, is reev'd into a Hole of the *Rudder* near the Head, and also thro' the Stern-Post; both the Ends thereof are splic'd together: Its Use is to save the *Rudder*, if by any Accident it should be struck off the Irons.

Running-ROPES, are those which Run on Blocks and Shivers.

Standing-ROPES, the *Sbrouds* and *Stays* are so called, because they are not removed, unless to be Eas'd or set Taught.

TOPE ROPES, those where-with the Sea-men Set or Strike the *Main* or *Fore Top-Masts*. See *Top*.

ROPE YARN. See *Yarn*.

ROUFE-Trees. See *Trees*.

ROUGH-Sea. See *Over-grown-Sea*.

**ROUND-House**, is one of the Apartments Aba't on board a Ship.

**ROUND-in**, or *Round-ast the Sail*, properly belongs to the *Main-Sail* and *Fore-Sail*; for when the Wind largeth, then they say,

*Let rise the Main-Tacks and Fore-Tacks!*

*Hale ast the Fore-Sheat to the Cat-head!*

*Hale the Main-Sheat to the Cubbridge-head!*

And when these Shears are thus haled down, they are kept from flying with the *Passarado-Rope*. This Work is called *Rounding-in*, or *Rounding-ast the Sails*.

**ROUND-Splice.** See *Splice*.

**ROUND-Seam.** See *Seam*.

**ROUND-Top.** See *Top*.

**ROWING**: Low-built Vessels are made to go from one Place to another by means of Oars, managed usually by Men sitting in Rows in the Vessel; whence this Work is called *Rowing*: 'Tis practis'd in all Boats whatever; As also in *Galleys* and the like Vessels; and would be of great Use for Ships in Calms, if it could be conveniently practis'd.

**ROWING-Engine**: Several Contrivances have bin given by Persons concern'd in these Affairs, for to facilitate the Labour of *Rowing* Boats at Sea or in Rivers, and of applying the same to Ships, to be used in Calms, or when there is but

little Wind; Among the rest *De Chales* mentions a pretty Invention in his *Treatise of Navigation*; The same was since somewhat improved by another Ingenious Person; And is after this manner:

A Wheel is fitted to the Drum-head of the Capstan, whose Teeth turn a Trundle-head, thro' which an Iron-bar is run that reaches a-cross, and goes thro' the Ship's-Side; and on its Ends without Board, at a convenient Distance from the Side of the Ship, are fasten'd two Drum-heads, like that on the Capstan; in which are fitted six or eight Paddles, so as to be taken out at Pleasure. And at the outermost Ends of the Paddles is fasten'd an Iron-Pin, with a Head on it: by which means, and by the Help of a Cord, taking an half Turn round about all these Pins, both the Paddles may be twisted, or strain'd and strengthen'd so, that they shall all work proportionably; and also the Paddles may, with a Luff-Tackle, be the more handily and easily lifted in and out, in order to be fitted into, or taken out of the Drum-heads of the Bar. Now if the Paddles be made proportionably large, according to the Number of Men that can be brought to the Capstan, who if they but work, the Vessel may make very good Way in smooth Water.

**ROWLE**, is a round Piece of Wood or Iron, wherein the Whip



Whip goes, being made to turn about, that it may carry over the Whip the Easier from Side to Side.

ROWSE *in*, signifies to hale or pull in; but it properly belongs to the Cable or Hawser.

ROWSE *in the Cable!* or, *Rowse in the Hawser!* that is, when a Cable or Hawser lies too slack in the Water, and it be required to have them made more Taught, lest on the Turning of the Tide, the Cable should happen to be foul of the Anchor.

RUDDER of a Ship, is a Piece of Timber hung at the Stern-Post upon Hooks and Hinges: In a Ship under Sail, the *Rudder* is, as it were, the Bridle of her, for by means of it, she is turn'd about at the Pleasure of him that stands at the Helm.

A Narrow *Rudder* is best for a Ship's Sailing, provided she can feel it; that is, be guided and turn'd by such a *Rudder*; For a broad *Rudder* will hold much Water, when the Helm is put over to any side: But yet if a Ship have a Fat Quarter, so that the Water cannot come quick and strong to her *Rudder*, she will require a *Broad Rudder*.

*Rake of the Rudder*; that is; the Aft-most Part of the *Rudder*.

RUDDER-Irons, are the Cheeks of that Iron whereof the Pintle is Part, which is fasten'd and

nailed down about the *Rake* of the *Rudder*.

RUDDER-Rope. See *Rope*.

RUMB, *Rhumb*, or *Course of a Ship*, is the Angle which she makes in her Sailing with the Meridian of the Place where she is. See *Course*.

*Complement of the Rumb*, is the Angle made by the Line of the Ship's Way, with any Parallel to the *Equator*.

RUMB signifies also, one Point of the *Mariners Compass*, or the two and thirtieth Part of the *Card* or *Horizon*, that is, 11 deg. and 15 minutes,  $11\frac{1}{4}$  degrees.

RUMB-Line, is the Line that is described by the Ship's Motion, on the Surface of the Sea, Steer'd by the *Compass*, making the same or equal Angles with every Meridian. These *Rumb-Lines* are *Helispherical* or *Spiral Lines*, proceeding from the Point where we stand, winding about the Globe of the Earth, and after infinite Revolutions come to the Pole, where they end. See *Loxodromic-Line*.

In *Plain* and *Mercator's Sailing*, these *Rumb-Lines* are represented by straight Lines. Their Use is to shew the Bearing of any two Places one from another; that is, upon what Point of the *Compass* any Place lies from another.

RUMMIDGE, signifies to remove Things from one Place to another. This is one of those *Sea-Terms* which are brought into common Use.

**RUMMIDGE** *the Hold.* See *Hold.*

**RUN** of a Ship, is that Part of her Hull under Water, which comes narrower by Degrees from the Floor-Timbers to the Stern-Post. This is also called *the Ship's Way aft-ward*; And according to the Ship's *Run*, she Steers well or ill, by reason of the Easiness or Difficulty of the Water's Passage to the Rudder. If too short and too full below, the Water comes but slowly to the Rudder, because the Force of it is broken by her Breadth: This is sometimes Remedied by putting on a false Stern-Post, tho' tis better to lengthen her.

*Good-Run*, a Ship is said to have a *Good-Run*, when she comes off handsomly by Degrees, and her Tuck not lying too Low.

*Bad-Run*, when the Tuck of a Ship lies too low, it hinders the Passage of the Water to the Rudder, and therefore she cannot Steer well, nor keep a good Wind, nor make any good Way thro' the Sea, but will be still falling to Leeward.

**RUN**, *Distance Run.* See *Distance.*

**RUNG-Heads**, a peculiar Name given to those Heads of the Ground-Timbers of a Ship, which are made a little bending, or where they begin to compass,

and do direct the Sweep or Mould of the Futtocks and Navel-Timbers; for here the Lines, which make the Compass and Bearing of a Ship, begins.

**RUNGS**, are the Floor-Timbers, or Ground-Timbers of a Ship, those that thwart the Keel, and are Bolted to it, and constitute her Floor, their Ends are the *Rung-Heads*.

**RUNNER**, is a Rope belonging to the Garnet, and to the two Bolt-Tackles, *viz.* that before, which comes to the Aftermost Shrouds of the Fore-Masts, and that Aft which comes to the Fore-most Shrouds of the Main-Mast. This *Runner* is reev'd in a single Block which is seiz'd to the End of a Pennant, and has at one End a Hook to hitch into any Thing, and at the other End a double Block, into which is reev'd the Fall of the Tackle or the Garnet, by which means it Purchases more than the Tackle or Garnet can do alone.

*Overhale the Runner!* That is, bring down that End which has the Hook to it, that it may be Hitch'd into the Sling, &c.

**RUNNING-Ropes.** See *Ropes.*

**RUNNING-Fights.** See *Fights.*

**RUT** of the Sea, is where it dashes against any Thing.



## S

**S**A I L, is made of several Pieces of strong Cloth, and fasten'd to the Yards and Stays, for receiving the Wind that ought to Impel the Ship along. There are several sorts of Sails belonging to Great Ships, most of which take their Names from their several *Yards*.

*Main-SAIL*, *Main-Top-Sail*, and *Main-Top-Gallant Sail*; are those that belong to the *Main-Yard*, *Main-Top-sail-Yard*, and *Main-Top-Gallant-Yard*.

*Fore-SAIL*, *Fore-Top-Sail*, and *Fore-Top-Gallant-Sail*; belonging to the *Fore-Yard*, *Fore-Top-sail-Yard*, and *Fore-Top-Gallant-Yard*.

*Misen Sail*, and *Misen-Top-Sail*; those that belong to the *Misen-Yard*, and *Misen-Top-sail-Yard*.

*Sprit-SAIL*, and *Sprit-Top-Sail*; belonging to the *Spritsail-Yard*, and *Spritsail-Top-sail-Yard*.

All these *Sails* are usually Cut in Proportion as the *Masts* and *Yards* are in Length.

*Drift SAIL*, is a *Sail* used Under Water, veered out right-a-Head by Sheats, as other *Sails*: It serves to keep the Ship's Head right upon the Sea in a Storm, and to hinder her Driving too-fast in a Current.

*Head-SAILS*, are those which belong to the *Fore-Mast* and

*Bow-spirit*: They keep the Ship from the Wind.

*After-SAILS*, are those that belong to the *Main-Mast* and *Misen*: They keep the Ship to Windward.

Therefore 'tis common, that Ships Sailing on a Quarter-Wind, require a *Head-Sail*, and an *After-Sail*; one to Countermand the other.

*Netting-SAIL*, is only a *Sail* laid over the *Nettings*.

*Studding-SAILS*, are Bolts of Canvas, or any Cloth that will hold Wind, extended in a Fair-Gale along the side of the *Main-Sail*, and Boom'd out with a *Boom*.

They are sometimes used to the Clew of the *Main-Sail*, *Fore-Sail*, and *Spritsail*, when the Ship goes before the Wind, or Quartering.

*Prest-SAILS*. See *Prest*.

*Short-SAILS*, or *Fighting-Sails*, are the *Fore-Sail*, *Main-Sail*, and *Fore-Top Sail*: These alone are used in a *Fight*, lest the rest should be fired, or spoil'd; besides, they would be troublesome to handle, hinder the Sight, and the Use of Arms.

The *Sails* which are made of *English Canvas*, comes far short of that which we have from *Holland*, as to Strength, and Goodness: And therefore, since the Use of this Manufacture was introduced into the Navy, for the Benefit of our Country; it were much to be wish'd, that it might soon be brought to  
Perfection,

Perfection, as of late, indeed, 'tis much improv'd; for otherwise, the Use thereof, may prove greatly Prejudicial, not only with respect to the Danger our Great Ships may be expos'd to thereby, but by obliging the Smaller to come into Port, for New Supplies, when the Safety of the Trade in our Channel, and up and down the Soundings; does, in Time of War, absolutely require their keeping out at Sea. Besides, the Opportunity of Service may be lost, not only with whole Squadrons, but single Ships, upon Meeting an Enemy: For if the Sails prove bad, it may, on the one hand, impede their getting up with them; and, on the other, subject them to a Surprize, when Out-number'd: And the Consequence may be Fatal to a Fleet, or any Number of Ships, on a *Lee-Shore*.

SAIL; besides its proper Signification, is often us'd for a Ship: As,

To Spy (or See) a Sail; that is, to Discry a Ship; therefore, he that Discovers it, usually calls, *A Sail! A Sail!* So when we speak of a Fleet, or Number of Ships together, we say, It consist of Forty or Fifty Sail, more or less; and not, Forty or Fifty Ships.

SAILING: The Art of Sailing, shews how to Conduct a Ship at Sea, or to Guide and Direct her from one Place to another. See *Navigation*.

GREAT-CIRCLE-SAILING.

See *Great-Circle*.

MERCATOR'S-SAILING. See *Wright's*.

MIDDLE-LATITUDE-SAILING. See *Middle-Latitude*.

PARALLEL-SAILING. See *Parallel*.

PLAIN-SAILING. See *Plain*.

At Setting SAIL the wind being Fair, and Steering right Before it, the Working Phrases, or Terms then used, are generally such as these:

*Let fall your Fore-sail!*

*Heave out Main-top-sail!*

*Hoise up Fore-top-sail!*

*Hoise up Main-top-soil!*

*Loose Spritsail!*

*Heave out Misen-top-sail!*

*Square your Spritsail!*

It continuing a Fair Loom-Gale; and it be required to have the Ship in all her Canvase, then,

*Heave out Spritsail!*

—— *Top-sail!*

—— *Fore-top-gallant-sail!*

—— *Main-top-gallant-sail!*

*Hoise up your Small Sails!*

*Hale aft your Fore-sh.ats!*

Note, That the *Main-sail* is now kept Furl'd: For if the *Fore-sail* and *Fore-Top-sail* be good Sails, the Ship will now make better Way, than if the *Main-sail* was down; which would Becalm the *Fore-sail*, and *Fore-Top-sail*; and the Ship steers best



best with her *Head-sails*. Now, at *Setting-Sail*, 'tis suppos'd that the *Sheets* are all Haled home, and the *Yards* Hois'd up; and then you have a *Ship* Compleat, Under-Sail right-afore.

If it prove a Fresh Gale, or that the Wind blow Fresh, then,

Hale down your *Fore-top-gallant-sail*!

Hale down *Main-top-gallant-sail*!

In *Spritsail-top-sail*!

Let go *Spritsail-top-sail-Sheets*!

Hale home his *Clew-Lines*!

In *Fore-top-gallant-sail*!

In *Main-top-gallant-sail*!

In *Misen-top-sail*!

Let go *Top-gallant-Sheets*!

Cast off *Top-gallant-Bow-Lines*!

Hale home *Top-gallant-Clew-Lines*!

Veer out some of the *Weather-sheet* of the *Fore-sail*!

Let go your *Weather-Braces*!

Top your *Spritsail*!

Lose *Main-sail*!

If the Wind Veers forward, then,

Get too your *Fore-Tack*!

Cast off your *Weather-sheet*!

Let go your *Weather-Brace*!

Veer out some of your *Lee-sheet*!

Let fall *Main-sail*!

Get too *Main-Tack*!

Cast off *Main-Brace*, and *Main-Top-sail*!

Hale aft *Main-sheet*!

If the Wind is Sharp, then,

In *Spritsail*!

*Square Spritsail-Yard*!

Let go *Spritsail-Sheets*!

Hale up *Spritsail-Clew-Lines*!

Get *Main-Bow-line* in *Block*!

Hale forward *Main-Bow-line*!

Hale *Main-top-sail-Bow-line*!

Hale tau't *Fore-Bow-line*, and

*Fore-top-sail-Bow-line*!

Hale aft *Main-sheet*!

Hale a-board *Misen*!

Set in your *Lee-Braces*!

And keep her as Near as she will Lie!

Then you have all your Sails *Trim'd Sharp*, or by a Wind!

If it prove a Stiff Gale, then,

Settle down your *Fore-top-sail*!

If much Wind, then,

Hale down *Fore-top-sail*!

Hale down *Main-top-sail*!

If it Blows still Harder, then,

Take in *Top-sails*!

Let go your *Lee-Braces*!

Cast off your *Bow-lines*!

Brace your *Weather-Braces*!

Let go *Top-sail-Sheets*.

Hale home *Top-sail-Clew-lines*.

The Sails being Furl'd, then,

*Square* your *Top-sail-Yards*!

Here the Ship is brought into her *Low-Courses*, or *Low Sails*.

If it prove to be Stormy-  
Weather, then,

*See that your Main-Halliards be  
Clear!*

*Make all your Geer Clear, to  
Lower the Main-Yard.*

*Hale down Misen!*

*Cast off Top sail-sheats!*

—— *Clew-Garnets!*

—— *Bunt-Lines!*

—— *Leech Lines!*

—— *Lifts, and all your other  
Geer.*

*Hale too the Capstan, to (Lower)  
or bring down the Yard!*

*Furl the Sail Sure!*

*Make fast the Yard for Tra-  
versing!*

If it be a *Grown-Sea*, and very  
Foul-Weather, then it's better  
Spooming, or putting her right  
Before the Wind.

*See the Guns be fast Lash'd!*

*Put the Helm a-Weather!*

*Right your Helm!*

*Let rise Fore-Tack!*

*Settle the Fore-Yard!*

If the *Fore Sail* give-way,  
then,

*Lower Amain!*

*Hale the Sail into the Ship,  
and Loose it from the Yard!*

*Get too the Fore-Bonnet!*

*Make all Clear, and Hoise the  
Fore-Yard!*

Thus you have the Ship  
brought from her *Canvas*, to a  
*Fore-Bonnet*, Spooming before

the Wind. And this is the  
usual Manner of Handling a  
Ship By, and *Large*, in *Fair*, and  
in *Foul-Weather*.

SAILORS, are those Men  
that perform the Work of a  
Ship, as Hoising the Sails, get-  
ting the Tacks a-board, Steering  
the Ship, Furling the Sails,  
Slinging the Yards, and the  
like, as required of them on all  
Occasions.

And as these Men are abso-  
lutely Necessary, for the Good  
of our Nation; so several Things  
are (or should be) very care-  
fully Perform'd with respect to  
them; As the Looking well after  
them, when Wounded, or Sick,  
at Sea; and when they are put  
on-Shore, under those Circum-  
stances: To this End, there are  
*Physicians* in the Fleet, with  
suitable Salaries. When they  
are put Sick a-Shore, they are  
Provided for, by Officers at the  
several Ports, by *Commissioners*  
of the Sick and Wounded, whose  
Business is to take Care, not only  
for their Lodgment, and Nurses,  
but also for all other Things Ne-  
cessary for the Cure of their  
Wounds, and Diseases.

Besides, Care is taken for the  
Convenient and Comfortable Re-  
ception of Poor, Maim'd, and  
Disabled Seamen, and the Wi-  
dows and Children of such who  
have lost their Lives in the Pub-  
lic Service, into the Hospital at  
*Greenwich*. Nor is the Govern-  
ment less wanting in making them

Easie;



Easie, as to their Pay and all other Particulars : Therefore they do expect from the Sailors a strict Compliance with their Duty ; and so to behave themselves, that not only their Country-men, but the rest of the World may be convinc'd, an *English* Sea-man does still retain his wonted Zeal and Bravery.

*SALLY-Port*, is a great Hole in the Side of a *Fire Ship*, made on purpose for the Men to escape when they have Grappled an Enemy, and fired their Train.

*SALUTE* is a Deference, and Respect, which at Sea, is render'd not only between Ships of different Nations, but also between those of the same Nation, according to the Degree and Quality of the Commanders.

And this Respect is shew'd by passing under the Lee, *Saluting* them with so many Guns, Trumpers, or Hale them thrice with a Joint Shout of the whole Ship's Company, and the like, according to the different Occasion requiring it.

And if any Ship or Fleet, either of our own or Strangers, whether Merchant-Men or Men of War, shall come up any thing near, or within reach of a Cannon shot, of any of Her Majesty's Ships, either at Anchor or under Sail, it becomes them to pass under her Lee, after the Custom of the Sea, and

in their going by, to *Salute* her, with some odd Number of Guns, the which are to be answer'd with fit Correspondency.

And the Number of Old Guns is, at Sea, so punctually and strictly observ'd, that whensoever they are given *Even*, 'tis receiv'd for an infallible Sign, that either the Captain, or some noted Officer, is dead in the Voyage.

These *Salutes* are of Use, not only in regard of an Acknowledgment of Superiority to Her Majesty's Ships, especially in our Channels, but that by an Expectance, and looking out after this, all treacherous Attempts, that may be Plotted, by stealing upon them to the Windwards, or laying of them a-board, either with Fire-ship, Mine-Ship, or the like, may seasonably be prevented and avoided.

And as Her Majesty's Admiral Ships are always to be *Saluted* with Guns by all Ships whatsoever ; so also, when any Ship or Ships comes to an Anchor under the Command of any Fort or Castle, they are to give some Guns ; the which are to be respectively answer'd by the Castle or Fort.

And when Ships that have been long in Consortship at Sea, are to part several Ways upon their Occasions, they usually *Salute* one the other with some Guns.

Also, 'tis a general Custom, upon the Death of any Commission'd

mission'd Officer, at Sea, at his throwing over Board, to Ring his Knell with some even Number of Guns.

**SCALE**, signifies any Measure, or Numbers which are commonly used; or the Degrees of any Arc of a Circle, or of such Right Lines as are divided from thence; as the *Sines*, *Tangents*, *Chords*, *Secants*, &c. drawn or plotted down upon a Ruler, for ready Use and Practice in Geometrical Operations.

**SCALE** of *Equal Parts*, is a Line equally divided, whose *Parts* may represent any Measure or Numbers whatsoever, as *Leagues*, *Miles*, &c. It serves to lay down any Measure taken; or a Line being laid down, to find how much of the Measure that Line contains.

**DIAGONAL-Scale**, is only a *Scale of Equal Parts*, divided with the utmost Accuracy, by means of a *Diagonal Line*.

**PLAIN-Scale**, is a *Scale* having on one Side thereof, the *Scale of Chords*, *Natural Sines*, *Tangents*, *Semi-Tangents*, *Secants*, *Rumbs*, *Hours*, *Leagues*, *Longitudes*, &c. and on the other Side, the *Diagonal Scale*. And by means of this, the several *Cases* in *Trigonometry*, and consequently in *Sailing*, are *Projected* and laid down.

**GUNTER'S-Scale**, is a large *Scale*, having on one Side the *Common Plain-Scale*; that is to say, the *Diagonal Scale* of

*Equal Parts*, and those of *Natural Sines*, *Tangents*, &c. On the other Side are drawn the *Lines of Artificial Sines*, and *Tangents*, fitted so to a *Line of Numbers*, or *Gunter's Line*, (so called from the Inventor Mr. Gunter) that all Questions in *Plain-Sailing*, &c. as also all *Proportions*, or where there are *Three Terms* given and a *Fourth* required, are easily wrought with *Compasses*; and that by this

#### R U L E.

The *Extent of the Compass* from the *First Term* to the *Second*, will reach from the *Third Term* to the *Fourth Term*. Or

The *Extent* from the *First Term* to the *Third*, will reach from the *Second* to the *Fourth Term*.

*Note*, That the *Meridian Line*, and *Line of Equal Parts* adjoining, on the *Gunter*; the *First* is or may be the *Meridian*, and *Degrees of Latitude* on *Mercator's Chart*; the latter, the *Equinoctial* and *Degrees of Longitude*.

**SCARFED**, signifies *Pieced*, *Fasten'd*, or *Joynd* in; and is said of one Piece of Wood let into another, by cutting away as much from the one as the other: And when any of the *Floor* or *Ground-Timbers* are not long enough of themselves, they are *Scarfd* into one another, to make two or three as one.

The *Stem of a Ship* is *Scarfed* into her *Keel*; that is, the two Pieces



Pieces are shaped away flanting, so as to joyn with one another close and even; and this the Carpenters call *Wood and Wood*.

SCOPER or *Scuper-Holes*, are little Holes close to the Decks, thorow the Ship's Sides: They serve to carry the Water off, that comes from the *Pump*, or any other Way.

SCOPER-*Leather*, or *Scuper-Leathers*, such as are nail'd over the *Scopers* upon the Lower Deck, serving to keep out the Sea from coming in, and yet to give way for it to run out.

SCOPER-*Nails*, or *Scuper-Nails*, are little short *Nails*, with broad Heads, made purposely to Nail the *Scuper-Leather*, and the Coats of *Masts*, and *Pumps*.

SCUTTLES, are little square Holes, cut in the Deck big enough to let one Man thorow; they serve to let People down below on Occasion: Or from Deck to Deck. They are generally before the Main-Mast, before the Knight in the Fore-Castle: In the Gun-Room to go down to the Stern-Sheats: In the Round-House, to go down into the *Captain's Cabin*, when forc'd by the Enemy, in a Fight A-loft. Some small *Scuttles* have Grattings over them, to give Light to them betwixt Decks, and for Out-lets to the Smoak of the Guns: But all *Scuttles* have Covers to them, that Men may not tumble in, when 'tis Dark.

SCUTTLES, also are little Windows, and Long Holes which are cut out in Cabbins, to let in Light.

SCUTTLE-*Hatch*, is the little *Hatch* that covers the *Scuttle*. See *Hatch*.

SEA, all the vast Collection or Body of Salt Water in General, is called *Sea*: But this Name is promiscuously apply'd to any of the Parts, whether *Ocean*, *Gulfs*, *Straits*, *Bays*, *Roads*, &c.

The Seas, with respect to  
EUROPE, are

The *Euxine Sea*, enclos'd with Part of *Europe* on the North and West, and Part of *Asia* on the South and East.

The *Mediterranean-Sea*, enclosed with *Europe* on the North, and *Barbary* on the South.

The *Irish-Sea*, enclosed with *Ireland* on the West, and *Britain*, on the East.

The *German-Sea*, enclosed with *Britain* on the West, and *Scandinavia* on the East.

The *Baltic-Sea*, enclosed with Part of *Germany* on the South, Part of *Poland* on the East, and *Swedeland* on the West.

The Seas in the other Parts of the World, are different Parts of the *Ocean*, variously named, according as they lie adjacent to different Countries, except the *Caspian-Sea* in *Asia*.

SEA-BOARD. See *Board*.

SEA-CHART. See *Chart*.

SEA COMPASS. See *Compass*.

SEA-DRAGS. See *Drags*.

SEA-GATE. See *Gate*.

SEA-MEN. See *Mariners*.

SEA-QUADRANT. See *Quadrant*.

SEA-YOKE. See *Yoke*.

HEAD SEA. See *Head*.

Overgrown-SEA. } See *Over-*  
Rough-SEA. } *grown*.

SEAMS of Ships, are the Places where the Planks meet, and are joined together.

To Parcel a Seam. See *Parcel*.

To Pay a Seam. See *Pay*.

SEAMS: This Word is also used according to common Acceptation, when speaking of Sails; and of these seams, there are two sorts, viz.

Monk-SEAM, is a Flat Seam. See *Monk*.

Round-SEAM, is so called, because Round like the common Seam.

SEASE, *Seaze*, or *Seize*, is to bind fast any Rope together, with small Rope Yarn, or the like: And the fastening of a Block at the End of a Pennant, Tackle, or Garnet, &c. is called *Seizing*, or *Seazing*.

SEASEN, or *Seasing*, is the Name of a Rope by which the Boat Rides by the Ship's-side, when in Harbour, &c.

SEEL, signifies much the same as *Heel*; for as 'tis called *Heeling*, when a Ship lies

down constantly or steadily on one Side; so 'tis called *Seeling*, when she tumbles on one Side violently and suddenly, by reason of the Sea's forsaking her, that is, the Waves leaving of her for a time in a Rolling Sea.

*Lee SEEL*; that is, when the Ship tumbles to *Lee-ward*: In this, even in a Storm, there is not much Danger, for the Sea will presently right her up again.

But in Case a Ship *Seels*, or Rolls to *Wind-ward*, then there is Fear of her coming over too short, or suddenly, and so be foundred, by having the Sea break right into her, or else have some of her upper Works carried away.

SEND, when a Ship falls deep into the Trough, or Hollow of the Sea, then 'tis said she *Sends* much that Way, whether *a-Head*, or *a-Stern*.

SENSIBLE-Horizon. - See *Horizon*.

SEPARATION; the same with *Departure*: Which see.

SERVE: To *Serve a Rope*, is to wind something about it, to keep it from fretting out.

To *Serve Ropes with Plats*, or *Sinnetts*, is to lay *Sinnet*, Spun or Rope-Yarn, or a Piece of *Canvase*, upon Ropes; then roll it fast about the Ropes, to keep it from galling, or fretting in any Place.

SET: To Observe on what Point of the Compass, the Sun, Land,



Land, &c. bears, is call'd, *Setting the Sun, Land, &c.*

SET-BOLTS. See *Bolts.*

SETTEE, is a Vessel, very common in the *Mediterranean*, with One Deck, and a very Long and Sharp Prow; they carry, some Two Masts, some Three, without Top-Masts; their Yards and Sails are all like the *Misen*: The least of them are of 60 Tuns Burthen: They serve to Transport Cannon, and Provision for Ships of War, and the like Service.

SETTLE a *Deck*; is to take it down—lower than it was at first.

SEW: *The Ship is Sewed*; that is, when a Ship, at Low-Water, comes to lie Dry on the Ground. If she be not left quite Dry, then they say, *She Sews* to such a Part.

And where the Ship cannot all lie Dry, then 'tis said, *She cannot Sew there.*

SHACKLES, are the Oblong Iron-Rings, bigger at one End, End than at the other, with which the Ports are shut fast, by thrusting the Wooden-Bar of the Port thorow them.

SHACKLES, also, are Rings like the former, fasten'd at the Corners of the Hatches, to lift them up with.

SHALLOP, is a small Light Vessel, with only Main-Mast and Fore-Mast, and Sails to be haled up and down on Occasion: They are generally good Sailers; and consequently,

very fit to serve as Tenders on *Men of War*, as they are often used.

SHANK of an *Anchor*. See *Anchor.*

SHANK-Panter, is a short Chain, fasten'd under the Fore-Mast-Shrouds, by a Bolt, to the Ship's-Side; having at the other End a Rope fasten'd to it: It serves to make fast the Anchor at the Bow; and the whole Weight of the aft-part of the Anchor rests thereon, when it lies by the Ship's Side: And the Rope by which 'tis haled up, is made fast about a Timber-head.

Sheep - SHANK - Knot. See *Knot.*

SHARP; As, *Sharp the Main-Bow-Line!* That is, Haul it taut.

SHEAR; that is, to Swing too and again.

*The Ship Shears*; that is, Goes in and out, and not right forward; either by not Steering steadily, or by means of the swift running of the Tide, &c. Then they say, *She Shears*; or *goes Shearing.*

SHEAR-OFF; that is, to get Away.

SHEATH: *To Sheath a Ship*, is to Case, as it were, that Part of her Hull which is under Water, with something to keep the Worms from Eating into her Planks; 'tis usually done, by laying Tar and Hair mix'd together, all over the Old Planks, and then nailing on thin New Boards: But this hinders a

Ship's Sailing ; therefore, of late, some have bin *Sheath'd* with Mill'd-Lead.

SHEATS, are Ropes bent to the Clew of the Sails ; serving in the *Lower Sails*, to *Hale aft*, or *Round off* the Clew of the Sails : But in *Top-sails*, they serve to *Hale Home*, that is, to Hale the Clew of the Sail close to the Yard-Arm.

*Standing Part of the SHEAT*, is that Part of it which is made fast to the Ring of the Ship's Quarter.

*Over-Hale the SHEAT !* that is, Hale upon the Standing-part of the *Sheat*.

*To Hale aft the Main-Sheats*, is in order to make the Ship keep by a Wind.

*To Hale aft the Fore-Sheats*, is, that the Ship may fall off from the Wind.

*Ease the Sheat !* That is, Veer it, or let it go out gently ; See *Eise*.

*Tally the Sheats !* That is, Hale aft the *Sheats* of the *Main*, and *Fore-Sail*.

*Let Fly the Sheat !* that is, Let it go all at once, and run out as fast as it can ; Then the Sail will hang loose, and hold no Wind. See *Fly*.

*False-SHEAT*, is a Rope bent to the Clews of the *Main*, and *Fore-Sail*, above the *Sheat-Block*, to Succour and Ease the *Sheat* in a violent Gust of Wind.

SHEATS, also, are those Planks under-Water, which come along the Ship's *Run*,

and are closed into the *Stern-Post*.

*Stern-SHEATS*, is that Port within Board in the *Run* of the Ship.

*Flown-SHEATS*. See *Flown*.

*SHEAT-Anchor*. See *Anchor*.

*SHEEP-Shank-Knot*, or *Sheer-Shank-Knot*. See *Knot*.

*SHEER-Hooks*. See *Hooks*.

*SHEER*, or *Sheering* ; the same with *Shear* : Which see.

*SHEERS*, are two Mast-Yards, or Poles set up an end, and at a pretty distance off at the Bottom, and seiz'd a cross one another near the Top ; this they call a *Pair of Sheers* : They are placed Below, upon the Chain-Wails of the Shrouds, and lash'd fast to the Ship's-side, to keep them steady Aloft : They serve either to take in, or let out a Mast ; or else for to hoise in or out into Boats, that have no Masts, such Goods as are to be taken in ; and for that End, there is fasten'd, at the place where they cross one another, a strong Double-Block, with a Strap.

*SHIFTERS*, are those Men on board a *Man of War*, who are Employ'd by the *Cooks*, to *Shift* or Change the Water in which the Fish or Flesh is put and laid for some time, in order to fit it for the Kettle.

*SHIVERS*, are those little round Wheels, in which the Rope of a Pulley or Block runs : They turn with the Rope, and have Pieces of Brass in their

Centres



Centres (call'd *Cocks*) with Holes in them, into which the Pin of the Block goes, and on which they turn. These *Shivers* are usually of Wood; but some are of Brass, as those in the *Heels* of the *Top-Masts*.

SHOALE, signifies the same as *Shallow*.

Good-SHOALING; that is, when as a Ship sails towards the Shore, she finds by her Sounding, it grows shallow by degrees, and not too suddenly; for then a Ship may go in safely.

SHOOT: *The Ballast Shoots*; that is, runs over from one Side to another.

SHORT-SAILS. See *Sails*.

SHOT of a Cable, is the splicing of two Cables together, that a Ship may Ride safe in deep Waters, and great Roads: For a Ship will Ride easier by one *Shot of a Cable*, than by three *Short Cables* out a-Head.

SHOT for *Ordnance*, are of several sorts: As,

*Case-SHOT*, is any thing of Small Bullets, Nails, Old-Iron, and the like, to be put into a *Case*, to Shoot out of *Ordnance*.

*Chain-SHOT*, are made of two Bullets, with a *Chain* betwixt them, so contriv'd, that they will spread their full Length in Flying.

*Cross-Bar-SHOT*, is a Round Shot, with a long Spike of Iron cast into it, as if it went thro' the Middle of it.

*Langrel-SHOT*. See *Langrel*.

*Round-SHOT*, are Round Bullets fitted in Proportion to the Bore of the Piece.

*Trundle-SHOT*, is only a Bolt of Iron, 16 or 18 Inches long, sharp-pointed at both Ends; and about a Hand's-breadth from each End, has a Round broad Bowl of Lead cast upon it, according to the Bore of the Piece.

SHOT *between Wind and Water*; that is, close by the Surface of the Water.

SHROUDS, are great Ropes in a Ship, that go up on both Sides of all the *Masts*, except the *Bow-sprit*: They are made fast below by Chains to the Ship's Sides; and aloft, over the Head of the Mast, their Pennants, Fore-Tackle, and Swisters being first put under them: And they are *served* there, to prevent their galling and fretting the Mast. The *Top-Mast Shrouds* are fasten'd to the Puttocks by Plates of Iron, and by Dead-Men's-Eyes and Lanniers also, as the others are.

*Ease the Shrouds!* That is, Get them Slacken'd.

*Set 'em taut the Shrouds!* That is, Set them Stiffer.

*Puttock-SHROUDS*. See *Puttocks*.

SIDES of a Ship, are distinguish'd into the *Starboard*, or *Starboard-Side*; that is to say, into the Right-Hand, and Left-Hand-Side. See *Starboard* and *Starboard*.

To give a *Broad-side* ; that is, to Fire all the Guns on one Side of the Ship.

*SIDE-Wind.* See *Wind.*

*SIGNALS*, are the several *Signs*, made either by Firing off certain number of Guns, putting out such Colours, or such a Light ; whereby it may be known, when the *Admiral* Tacks about, when He intends to lie a-*Try*, when a-*Hull*, when to Fight, when to Chase, when to Leave off ; and when any of the Fleet are too-far a-*Head*, to Retire, by sparing some Sail ; or when they are too-far a-*Stern*, to cause them to make all the Sail they can, to get up : These *Signals* are particulariz'd and communicated in the Instructions sent to the *Commander* of every Ship of the Fleet, before their putting out to Sea.

As, The Day that the *Admiral* designs to Set out to Sea, He usually causes his Top-Sails to lie loose upon the Cap, very early in the Morning : And if it be Hazy, Dark-Weather, and that the Fleet be large, then about two or three Hours before he begins to Weigh his Anchors, He Fires a Gun.

If the *Admiral* finds Occasion to Tack about in the Day-time, He Fires a Gun, to cause the rest of the Fleet to Look out, and do as He does. If it be in the Night-time, He, besides his usual Lights, puts one Light either in the *Main-Top*, or some

remarkable Place as determin'd for such a *Signal*, and Fires a Gun.

If he designs to lie a-*Hull*, then he puts Two Lights there.

If to lie a-*Try*, they put Three Lights out in the same Place.

If Occasion requires a General Convention of the *Captains* on-Board the *Admiral*, He usually hangs out a *Yellow* Flag in the uppermost part of his *Main*, or *Mizen-Shrouds*.

If a Council of War is Call'd, He hangs a *Blue* Flag in the same Place.

If a Fleet Meets an Enemy's Fleet, and that, after due Consultation on-Board the *Admiral*, it be thought fit to Engage them ; He takes in his Ordinary *Ensign*, and heaves out another all *Red*, which is call'd, by some, the *Bloody Colours*. By which *Signal*, the whole Fleet may Prepare and Order themselves for a Sea-Engagement.

If any Ship of a Fleet Discovers any strange Ship, and would acquaint the whole Fleet with it ; he puts abroad some Flag on that Part of the Ship which points most to the Ship seen ; and Fires a Gun, to give Notice of the *Signal*. If it be a Fleet that is Discover'd, he puts out two Flags.

If, in the Day-time, any Ship in the Fleet, finds her self in Danger of Foundering in the Sea, by Springing of a Leak, or any other Mischance, she may give Three Guns, then shew a

*Waft*



Waft from the Main-Top. If it be in the Night-time, shew a Light, and continue Firing now and then a single Gun; by that means they may be taken notice of, found out, and reliev'd.

If a Fleet, coming out of Sea, expects a Land-fall, the first Ship that discovers it, is to give present Notice thereof to the rest of the Fleet: If it be in the Day-time, by shewing her Colours abroad, tho' it be (for a time) in the Main-Top it self, inclining them to that Part whence the Land is seen: If it be in the Night-time, give Two Guns, shew a Light, Tack about and stand off, that the rest of the Fleet may observe the same.

There are peculiar *Signals* made and known to every Ship of a Fleet, that having lost Company, and coming afterwards in sight, they may presently be discover'd one to the other. There are also Variety of other *Signals*, either for the whole Fleet, some particular Squadron, or Division, or for some particular Ship or Ships, all known to the Persons concern'd, from their Instructions: So that what is here said, serves only to give a general Notion of *Signals*, and their Use. But whatever they be, at Sea, a diligent looking after them is to be practis'd, and at all times, a careful Attention is to be given, by every particular Ship in the Fleet.

*SINICAL-Quadrant*, is made of Brass, or Wood, with *Sines* drawn from each Side intersecting one another; and an *Index* divided by *Sines* also; with 50 *degrees* on the Limb, and two Sigh's to the Edge, to take the Altitude of the Sun. But sometimes, instead of *Sines*, 'tis divided all into equal Parts: It serves to Solve any Problem in *Plain-Sailing*, and is much in Use among the *French* Seamen.

*SINNET*, is a Line made of Rope-Yarn, commonly consisting of two, four, six or nine Strings, platted in three Parts over one another, and then beaten smooth and flat with a Wooden Mallet: It's Use is to serve Ropes, &c. to keep keep them from Galling.

*SKARFED*, the same with *Scarfed*.

*SKEGG*, is that small and slender Part of the Keel, which is cut slanting, and left a little without the Stern-Post; 'tis now much out of Use.

*SKIFF*, is the least of Ship-Boats: It serves chiefly to go ashore in, when the Ship is in Harbour.

*SKUPPERS*, or *Skupper-Holes*, the same with *Scoper-Holes*.

*SLATCH*, when any Rope or Cable hangs slack, the middle Part which hangs down, is called the *Slatch of the Cable*, or *Rope*.

*SLATCH of fair Weather*, so the Sea-men call a small Inter-

val of fair, that comes after foul Weather.

**SLEEPERS**, are Timbers ly-before and aft in the Bottom of a Ship on each Side of the Keelson; the lower-most of them is bolted to the Rung-heads, and the uppermost to the *Futtocks*, in order to strengthen and fasten the *Futtocks* and *Rungs*.

**SLINGS** for Hoising up *Casks* or any heavy Things; are made, commonly, of a Rope spliced at either End into it self, with one Eye at either End, so long as to be sufficient to receive the Cask, &c. The middle Part of the Rope is also seiz'd together, and so makes another Eye to hitch the Hook of the Tackle.

**SLINGS** for Hoising of *Ordnance*, are made much longer, and with a small Eye at each End, one of which is put over the Breech of a Piece of *Ordnance*, and the other Eye comes over the End of an Iron-Crow, which is put into the Mouth of the Piece, to weigh and Hoise the Gun, as they please.

**SLINGS** for *Yards*, are strong Ropes, or Iron-Chains, with which they are bound fast to the Cross-Trees a-loft, and to the Head of the Mast; that if the Tye should happen to break, or to be shot to pieces in a Fight, the *Yard* nevertheless may not fall down upon the Hatches.

To **SLING** a Man over Board,

to stop the *Leaks*, is done thus; The Man is truss'd up about the Middle, in a piece of *Canvas*, and a Rope, to keep him from sinking; with his Arms at Liberty, a Mallet in one Hand, and a Plug wrapp'd in *Okum*, and well Tarr'd in a *Tarpawlin-Clout* in the other, to beat it quickly into the Hole.

**SLOOPS**, are Vessels attending our Men of War, and generally of about 66 Tuns, carrying about 35 Men, and commonly two Guns. See *Shallops*.

**SMACKS**, are small Vessels, with one Mast, which attend on Ships of War, either in carrying the Men or Provision aboard: They also serve near the Coasts for Fishing, and the like.

**SMALL CRAFT**. See *Craft*.

**SMITING-Line**, is a small Rope fasten'd to the *Misen-Yard-Arm*, below at the Deck, and is always furl'd up with the *Misen-Sail*, even to the upper End of the *Yard* and from thence it comes down to the *Poop*. It serves to loose the *Misen-Sail*, without striking down the *Yard*; which is easily done, since the *Misen-Sail* is furl'd up only with *Rope-Yarn*; and therefore when this Rope is pull'd hard, the *Rope-Yarn* breaks, and so the *Sail* falls down of it self.

**SMITE** the *Misen*! that is, Hale by the *Smiting-Line*, that the *Sail* may fall down.

**SNATCH-**



SNATCH-Block, or SNAP-Block. See Block.

SOCKETS, in a Ship, are the Holes which the Pintles of the Murdering Pieces go into.

SOUND, in *Hydrography*, is any great In-draught of the Sea, betwixt two Head-lands, where there is no Passage thro': As that of the *Baltic-Sea*, *Hudson's Bay*, *White-Sea*, &c.

To SOUND, or *Sounding*, is to try the Depth of Water with a Line and Plummer, called,

SOUNDING-Line; that is, a Line, by which Sea-men find where the Ship may Sail by the Depth of the Water. 'Tis bigger than a *Deep-Sea-Line*, and is not much above 20 Fathom in Length. 'Tis mark'd at 2 Fathom next the Lead, with a piece of Black Leather; at 3 Fathom the like, but slit; at 5 Fathom with a piece of white Cloth; at 7 Fathom, with a piece of Red &c. with some such Distinction all along. This Line may be used, when the Ship is under *Sail*; Which cannot be done so well with the *Deep-Sea-Line*: in using of that, the Ship is usually brought upon the *Back-Stays*.

SOUND the Pump, that is, to let a small Line, with some Weight at the End, down into the Pump, to know what Depth of Water there is in it.

SOUNDING-Lead, is six or seven pound weight of Lead, near a Foot long. He that Heaves this Lead, stands by the

Horse, or in the Chains, and there Sings, *Fathom by the Mark* 5, 0 and a shaftment less 4, 0 &c.

SOUND the Pump; that is, to let a small Line, with some Weight at the End, down into the Pump, to know what Depth of Water there is in it.

SOUTH, one of the four Cardinal-Points of the Mariner's-Compass, 'tis directly opposite to the North Point.

SOUTHERN-Hemisphere. See Hemisphere.

SOUTHERN-Tropic. See Tropic.

SOUTHING, is the Difference of Latitude a Ship makes in Sailing to the Southward. See Difference of Latitude.

SOUTH-Pole, is a Point in the Southern Hemisphere of the Heavens, 90 Degrees, every way, distant from the Equinoctial.

SOUTHWARD; that is, towards the South.

SOUTH Declination. See Declination.

SPEEKE, the same with Spike.

SPELL, signifies to let go the *Sheet* and *Bow-lines* of a *Sail*, chiefly the *Misen*; and Bracing the *Weather-Brace* to the Wind, that the *Sail* may lie more loose, in case it has so much Wind in it, that the *Mast* is in danger of being wrong'd.

SPELL the *Misen*! that is, take in the *Misen*, and Peek it up.

To do a *Spell*, signifies doing any Work for a short time, and then leaving it.

To Give a *Spell*; that is, to Work instead of such a One.

A *Fresh Spell*; that is, when Fresh Men come to Work, or to Relieve another Gang.

SPENT: As, *The Ship has Spent her Mast, or Yard*; that is, Her Masts, or Yards, have bin Broken down by Foul-Weather, or any such Accident: But if a Ship lose her *Mast, or Yard, in a Fight*; then 'tis said, *Her Mast, or Yard, was Shot by the Board.*

SPHERE, or *Globe*, is an Artificial Representation of the Whole Surface of the *Terraqueous Ball*; for the more distinctly Viewing of its Constituent Parts, and the better Comprehending its Various Positions; which are either *Parallel, Right, or Oblique.*

PARALLEL-SPHERE, is that Position of the *Globe*, which has,

1. The *Poles* of the *World* in the *Zenith* and *Nadir*.

2. The *Equator* in the *Horizon*.

3. The *Parallels* of *Latitude* Parallel to the *Horizon*.

And the Inhabitants of this *Sphere*, are those, if any, who live under the *Two Poles* of the *World*.

RIGHT-SPHERE, is that

Position of the *Globe*, which has,

1. The *Poles* of the *World* in the *Horizon*.

2. The *Equator* passing thro' the *Zenith* and *Nadir*.

3. The *Parallels* of *Latitude* Perpendicular to the *Horizon*.

And the Inhabitants of this *Sphere*, are those who live under the *Equinoctial-Line*.

OBLIQUE-SPHERE, is that Position of the *Globe*, which has,

1. One of the *Poles* of the *World* Above, and the other Below the *Horizon*.

2. The *Equator* partly Above, and partly Below the *Horizon*.

3. The *Parallels* of *Latitude* cutting the *Horizon* Obliquely.

The Inhabitants of this *Sphere*, are those who live on all Parts of the *Earth*, except those exactly under the *Poles* of the *World*, and *Equinoctial Line*.

*Ptolemaic Armilar* SPHERE, is that where the Great Circles of the *Sphere*, viz. the *Horizon, Equator, Meridian, Ecliptic*, with the *Two Colures*, and the Lesser Circles, viz. the *Two Tropics*, and *Two Polar Circles*, being made in *Brass, Wood, &c.* are put together in their natural Order, and placed in a Frame, so as to represent the True Position and Motion of those Circles, and the *Cœlestial Bodies*, supposing the *Earth* the Centre of the *Universe*, according to the No-  
tion



tion of *Ptolemy*, and his Followers.

*Copernican* SPHERE, is that which shews the *Phænomena*, supposing the *Earth* to Move, and the *Sun* placed in the Centre of its *System* according to the now-Receive'd and Approv'd Opinion.

SPIKES, or *Speeks*, are large long Iron Nails, with Flat Heads; they are of divers Lengths, some a Foot or two long; and some are Jagged, so that they cannot be drawn out again: They are used to fasten the Planks and Timbers of a Ship.

MARLINE-SPIKE. See *Marline*.

SPIKING up the Ordnance; that is, fastening a Coin with *Spikes* to the Deck, close to the Breech of the Carriages of the Great-Guns, that they may keep Close and Firm to the Ship's-Sides, and not break-loose when the Ship Rolls, and by that means endanger the breaking-out the But-head of a Plank.

SPINDLE, is the Smallest Part of a Ship's *Capstan* which is betwixt the Decks. The *Spindle* of the *Jeer-Capstan* has *Whelps* to heave the *Viol*. See *Capstan*.

To SPLICE a Rope, is to untwist two Ends of Ropes, then twist them both together and fasten them one into the other.

A Cut SPLICE, is when a Rope is let into another with as much Distance as one pleases, so as to have it undone at any time, and yet be strong enough.

A Round SPLICE, is when a Rope's-End is so let into another, that they shall be as Firm, as if they were but one Rope.

To SPLICE a Cable. See *Cable*.

SPLIT: As, *The Sail is Split*; that is, The Sail is blown to Pieces.

SPOOMING, or *Spooning*: When a Ship being under-Sail in a Storm at Sea, cannot bear it, but is forc'd to put right before the Wind, without any Sail; then they say, *The Ship Spooms*: So that if a Ship will neither *Try*, nor *Hull*, then *Spoom*; that is, Put her Right before the Wind.

SPOOMING with the *Fore-sail*; that is, when the Ship *Spooms*, and that there is danger lest she should bring her Masts by the Board, with her Rolling, or *Seel* under-Water, and so *Founder*; then 'tis usual to set up the *Fore-sail*, to make her go the steadier, especially if there be *Sea-room* enough.

SPOUTS, in the *West-Indies*, and other Parts of the World, are, as it were, Rivers falling intirely from the Clouds, as out of *Water-Spouts*; they make the Sea, where they fall, rebound in exceeding high *Flashes*.

SPRING a Leak, is said of a Ship that begins to *Leak*.

SPRING a Mast: When a Mast is only crack'd, and not quite broken, in any Part of it, as in the *Partners*, the *Hounds*, &c. then 'tis said, *The Mast is Sprung*.

SPRING-

**SPRING-TIDE**, is the Encreasing higher of a *Tide*; after a *Dead Neap*; this is about Three Days before the *Full*, or *Change* of the *Moon*: But the Highest *Spring-Tide* is Three Days after the *Full*, or *Change*; then the Water runs highest with the *Flood*, and lowest with the *Ebb*, and the *Tides* run more strong and swift than in the *Neaps*.

**SPRIT-SAIL**. See *Sail*.

**SPUNGING** of a *Great-Gun*, is Clearing of its Inside after 'tis Discharg'd, with a Wad of *Sheep-Skin*, or the like, roll'd about one end of the *Rammer*: And this prevents all Danger of any *Fire* being left in the *Piece*; which might prove of ill-Consequence to him who should *Load*, or *Charge* it again.

**SPUN-YARN**; is *Rope-Yarn*, whose *Ends* are beaten, or scrap'd thin, and so *Spun* one *Piece* to another, that it may be as long as is necessary: It serves for several *Purposes* on-board a *Ship*, as to make *Caburnt*, and the like.

**SPURKETS**, are the *Spaces* betwixt the *Timbers* along the *Ship's Side*, in all *Parts*, betwixt the *Upper* and *Lower Futtocks*, or betwixt the *Rungs* fore and aft. Those in the *Howl*, below the *Sleepers*, are broad *Boards*, which are now and then taken up, to clear the *Spurkets*, when any thing has got between the *Timbers*.

**SQUADRON**, is a particular *Detachment* of *Ships of War*;

or one of the *Three Bodies*, which, in *Order of Battle*, composes the *Van*, *Centre*, and *Rear*: Each of which is sometimes distributed into *Three Divisions*, and distinguish'd by their *Flags* and *Colours*. So that when a *Fleet* is *Divided* into *Three Squadrons*, each *Squadron* has its *Admiral*, and each *Admiral* has its *Flag*; by which the *Squadron* is named, and distinguish'd, as the *Flags* are, either *White*, *Blue*, or *Red*: The *Flag* of the *White Squadron* being *White*, with a *Frank-Quarter*, and a *Cross Gules*. That of the *Blue Squadron* is *Blue*, with a *Frank-Quarter Argent*, and *Cross Gules*, &c.

In *Sailing*, also, a great *Fleet* is usually *Divided* into *Three Squadrons*; The *Admiral's*; the *Vice-Admiral's*; and the *Rear-Admiral's Squadron*: The which being distinguish'd by their *Flags* and *Pendants*, are to put themselves, and, as near as may be, to keep themselves in their *Customary Places*; viz.

The *Admiral* with his *Squadron*, to *Sail* in the *Van*; that so he may *Lead* the *Way* to all the rest, in the *Day-time*, by the *Sight* of his *Flag* in the *Main-Top-Mast-Head*; and in the *Night-time*, by his *Lights* or *Lanterns*.

The *Vice-Admiral* and his *Squadron* is to *Sail* in the *Centre* or *Middle* of the *Fleet*.

The *Rear-Admiral*, and the *Ships* of his *Squadron*, to bring up the *Rear*.



But sometimes other Divisions are made ; and those compos'd of the Lighter Ships, and Best Sailors, and are placed as Wings to the Van, Centre, and Rear.

**SQUARE** : As, *Square the Yards!* See *Yards*.

**STAFF**, *Back-Staff* ; the same with *Quadrant* : Which see.

**Flag-STAFF**, is that long *Staff*, or Piece of Wood, whereto the *Flag* is made fast, and along which 'tis hois'd up.

**FORE-STAFF**, or *Cross-Staff*, is an Instrument used at *Sea*, chiefly for observing the *Sun* or *Star's Altitude* : It is call'd *Fore-Staff*, from the Position of the Observer in Using it, whose Face is towards the Thing Observed, generally : Tho', for the *Sun*, it's so Contriv'd ( for Preserving the Eye ) to be used Backward.

It's call'd a *Cross-Staff*, from its Form, being a *Square Staff* with three or four Pieces a-cross it, which are call'd *Crosses*.

The *Staff* is usually 30 Inches, or 3 Feet long, and more than Half an Inch Square, having four Sides, each Graduated unequally, like the *Scale of Tangents* ; to each Side there belongs a distinct *Cross* : Tho' sometimes, the Shortest *Cross* is made to serve two Sides of the *Staff* ; that is, the Breadth is for the *Ten-Cross*, and Length for the *Thirty-Cross* : Besides this, it has two other *Crosses* ; the Longest is call'd, the *Ninety-*

*Cross* ; the other, the *Sixty-Cross*. And these Four *Crosses* are thus to be understood :

The *Ten-Cross*, belongs to that Side beginning at 3 deg. and ending at 10 deg.

The *Thirty-Cross*, belongs to that Side beginning at 10 deg. and ending at 30 deg.

The *Sixty-Cross*, belongs to that Side beginning at 20 deg. and ending at 60 deg.

The *Ninety-Cross*, belongs to that Side beginning at 30 deg. and ending at 90 deg.

### The Use of the FORE-STAFF.

It's commonly used at *Sea*, to take the *Meridian Altitude* of the *Sun* or *Stars* by ; in order to find the *Latitude of the Place* : And that is perform'd in the following manner ;

1. The *Ten*, *Thirty*, *Sixty*, and *Ninety Crosses*, are to be used according as the *Meridian Altitude* is more or less ; that is,

If less than 10 deg. use the *Ten-Cross*.

If between 10 and 30 deg. use the *Thirty-Cross*.

If between 30 and 60 deg. use the *Sixty-Cross*.

If more than 60 deg. use the *Ninety-Cross*.

2. Having consider'd which *Cross* is suitable, Put it on the *Staff* so, that the flat Side of the *Cross* may be towards the flat End of the *Staff*.

3. The

3. Then hold the flat End of the *Staff* to the Corner of your Eye ; there let it rest upon your Eye-bone, as near the Corner of your Eye as you can, so it does not hinder the Sight.

4. And look to the Upper-end of the *Cross* for the *Sun*, or *Star* ; and at the Lower-end, for the *Horizon*.

5. But if, at the Lower-end of the *Cross*, you see all Sky, and no Water ; then draw the *Cross* a little nearer to your Eye.

6. If, on the contrary, you see all Water, and no Sky ; then slide the *Cross* a little farther from you.

7. Then, if you see the Centre of the *Sun* or *Star* at the Upper-end of the *Cross*, and the *Horizon* at the Lower-end, the *Cross* stands as it ought.

8. Wait till the *Sun* or *Star* be on the *Meridian* : Upon frequent Tryals, as the *Sun* or *Star* Rises, draw the *Cross* a little nearer to your Eye.

9. If the *Sun* or *Star* be fallen, you'll presently have the *Horizon* hid from you by the Water ; then stir not the *Cross* out of its Place, ( for the Observation is over, ) and see at what *Degree*, &c. it rests, ( on that side of the *Staff* belonging to it ; ) and that will be the *Meridian Altitude*, or its *Complement*, sought, according to the word *Alt.* or *Compl.* on the *Staff*.

### How to Use the FORE-STAFF Backwards.

This is only used with the *Sun* ; and for this Purpose, the *Ten-Cross* has another Piece put cross it ; so that the Lower-edge of this *Cross-Piece* lies even with the Middle of the Square-Hole in the *Ten-Cross* ; which also answers to the Middle of the Thickness of the *Staff*.

And there is a Plate of *Brass*, with a Hole in it, so fitted, that it will slide off and on the Ends of the *Ninety*, *Sixty*, or *Thirty-Crosses*.

These Two Things added to the *Fore-Staff*, make it fit for a *Backward* Observation of the *Sun* ; which is thus :

1. According as the *Meridian Altitude* of the *Sun* is more or less, so use the *Ninety*, *Sixty*, or *Thirty-Crosses* ; putting it on the *Staff*, the Flat-Side of it even with the Flat-End of the *Staff*, there screw it fast ; and at one End of the *Cross*, slip on the foresaid *Brass-Plate*, so as to leave a Slit-Sight thro' it near the Lower-end of the *Cross*.

2. Put the *Ten-Cross*, ( having a *Cross-Piece* on it, ) on the *Staff*, the Flat-side of it towards the other *Cross*, at the *Staff's*-End.

3. Turn your *Back* to the *Sun* ; Look thro' the Slit-Sight, -at the Lower-end of the *Cross*, for the Shadow of the Upper end, lying on the *Ten-Cross*, in the Line answering to the Middle of the *Staff*,



Staff, and on each Side of the Staff.

4. At the same time, the *Horizon* should be seen (thro' the said Slit) to lie even with the Shadow on the Middle-Line, in the *Ten-Cross*, at each End of it, on both Sides of the *Cross*.

5. In looking thro' the Slit-Sight, you see the Shadow on the Middle-Line; but instead of the *Horizon*, you see only Water there; then draw the *Ten-Cross* nearer, till the Shadow and *Horizon* agree or meet in the said Middle-Line.

6. On the contrary, Looking as before, instead of the *Horizon*, you see *Sky* meet the Shadow on the Middle-Line; then put the *Ten-Cross* from you, till you see the *Horizon* and Shadow meet at the Line.

7. Continue Observing, till the *Sun* be at the Highest; and as the *Sun* Rises, you must draw the *Ten-Cross* nearer, in order to keep the *Horizon* and *Shadow* together on the Middle-Line of it.

8. If the *Sun* be fallen (after you have continued Observing, as before Directed) the *Horizon* will lie below the *Shadow*, on the Middle-Line; then is the *Observation* ended. Stir not the *Ten-Cross* out of its Place; for where it now stands, on that side of the *Staff* belonging to the *Cross*, at the End of it, is the *Sun's Meridional Altitude*, or *Complement* thereof, which was required.

STANCHIONS, or *Stantions*, are those Pieces of Timber, in a Ship, that are set up Pillar-wise, to support and strengthen the *Wast-Trees*.

STANDARD-ROYAL. See *Flags*.

STANDING-Coins, or *Standing-Quins*. See *Coins*.

STANDING-Part of the *Sheat*. See *Sheat*.

STANDING-Ropes, are those which do not run in any *Block*, but are set *tau't*, or let slack, as Occasion serves, as the *Sheat-Stays*, *Back-Stays*, and the like.

STANDING-Part of a *Tackle*, is the End of the Rope where the *Block* is seiz'd or fasten'd; as the other, which is hal'd, is call'd the *Fall*.

STARBOARD, is the Right-side of the Ship, or the Right-Hand; as *Larboard-side* is the Left.

STARBOARD the *Helm*! or, *Helm a Starboard*! in Conning a Ship, is to put the *Helm* to the Right-side of the Ship, or to put the *Helm a-Starboard*, to make the Ship go to the *Larboard*; for the Ship always Sails contrary to the *Helm*.

STAYS; are Ropes belonging to all *Masts*, *Top-Masts*, and *Flag-Staffs*, except the *Spritsail-Top-Mast*: They serve to keep the *Masts* from falling aftward, or too much forward.

Main STAY; that is, the *Stay* of the *Main-Mast*: 'Tis made fast by a *Lannier* to the *Collar*,

Collar, which comes down about a Knee, below the Head.

*Main-Top-Mast-STAY*, is made fast to the Head of the *Fore-Mast*, by a Strap and *Dead-Man's-Eye*.

*Main-Top Gallant-Mast-STAY*, is, in like manner, made fast to the Head of the *Fore-Top-Mast*.

The *Fore-Mast*, and *Masts* belonging to it, are likewise *Stay'd* to the *Bow-sprit*, and *Spritsail-Top-sail-Mast*: And those *Stays*, do likewise *Stay* the *Bow-sprit* it self.

*Misen-STAY* comes to the *Main-Mast*; and the *Misen-Top-Mast-Stays*, to the *Shrouds*, with *Crows-Feet*.

All *Stays* have their *Blocks*; and their Length are generally, the same with that of the *Mast* they belong to.

*Back-STAYS*, are those which serve to keep the *Masts* from pitching forward, or over-board, because they go on either Side of the Ship; and therefore the *Main-Mast*, *Fore-Mast*, with the *Masts* belonging to them, have these *Back-Stays*.

*STAYING* a Ship, or, *To bring a Ship upon the Stays*, is in order to her *Tacking*, and is done thus:

At the same time,

*Bear up the Helm!*

*Let Flie the Fore-sail-Sheat!*

*Let go the Fore-Bow-line!*

*Brace the Weather-Brace of the Fore-sail.*

The same is also done to the *Top-sail* and *Top-Gallant-sail*, only

their *Sheats* must be kept fast.

If the *Spritsail* be out, then,  
*Let go the Spritsail-Sheat*, with  
 the *Fore-Sheat*,  
*And Brace the Weather-Brace!*

But the *Tacks*, *Sheats*, *Bracings*, and *Bow lines* of the *Main-sail*, *Main-Top-sail*, and *Misen*, are not altered.

And when the *Wind* comes in at the *Bow*, which before was *Lee-Bow*, it drives all the *Sails* Backwards against the *Shrouds* and *Masts*; so that the *Ship* makes no *Way* forward, but drives with her *Broad-side*. And those are accounted the best *Ships*, which will *Stay* with the fewest *Sail*.

*STEADY!* is a *Word* of *Command* to the *Man at Helm*, to keep the *Ship* right upon that *Point* he *Steers* by, and not to make *Yaws* in or out.

*STEER: To Steer a Ship*; is to *Guide*, or *Direct* her *Course* by the *Helm*.

And there are *Three* ways to *Steer* by; *viz.*

1. By any *Mark* on the *Land*, so as to keep the *Ship* even by it.

2. By the *Compass*; which is, to keep the *Ship's-Head* upon such a *Rumb*, or *Point* of the *Compass*, as best leads to the design'd *Port*.

3. To *Steer* as one is bidden, or *Conn'd*; which is the *Duty* (in



( in Great Ships ) of him that is taking his Turn at the Helm.

And he is reckon'd the best *Steers-man*, that uses the least Motion in putting the Helm over, to and again, and that keeps the Ship best from making *Yaws*, that is, from running in and out.

STEERAGE, is that Part of the Ship next below the Quarter-Deck, before the Bulk-head of the Great-Cabbin: 'Tis here, in most Ships of War, stands the *Steers-man*, or he that Guides the Helm or Rudder of the Ship.

STEEVE: The *Bow-sprit*, or *Beak-head of the Ship*, does Steeve; that is, it either stands too-upright, or not strait enough forward.

STEEVING, is also a Word used by *Merchant-men*, when they stow Cotton, or Wool, which is forc'd in with Screws; this they call *Steeving* their Cotton, or Wool.

STEM of a Ship, *Main-Stem*, is that great Piece of Timber which is wrought Compassing, and Scarf'd at one End into the Keel of a Ship, and comes bowing or bending right before the Fore-Castle. This *Stem* guides the Rake of the Ship; and all the But-ends of the Planks forwards are fix'd into it.

*False-STEM*, is fix'd before the *Right one*, where that is made too-flat for the Ship to keep the Wind well: Which Defect is remedied by a *False-Stem*;

that will make her Rid more Way, and bear a better Sail.

STEP of the *Mast* or *Capstan*, in a Ship, is that Piece of Timber whereon the *Masts* or *Capstans* do stand at bottom.

STERN of a *Ship*, is, properly, the Outmost-part of a Ship, abaft: Tho', generally speaking, 'tis all the Hindermost or Aftmost-part of a Ship.

STERN-*Chase*. See *Chase*.

STERN-*Fast*, is some Fastenings of Ropes, &c. behind the *Stern* of a Ship, to which a Cable, or Hawser, may be brought or fix'd, in order to hold her *Stern* fast to a Wharf, &c.

STERN-*Post*, is a great Timber let into the Keel, at the *Stern* of the Ship, somewhat sloaping, into which are fasten'd the *After-Planks*: And on this *Post* hangs the Rudder, by its Pintles and Gudgeons.

STEWARD of a *Ship*, is he that receives all the Victuals from the *Purser*; and he is to see it well Stow'd in the Hold: In his Custody are all Things of that nature belonging to the Ship's Use. He is to look after the Bread, and to distribute out the several Messes of Victuals in the Ship. He has an Apartment for himself in the Hold, call'd the *Steward-Room*: And he has usually a *Mate* under him.

STIRRUP of a *Ship*, is a Piece of Timber put on the Ship's Keel, when some of it

is beaten off, and the *Carpenter* cannot come to mend it, or put in a new Piece ; then they patch on a Piece of Timber, and bind it with an Iron which goes under the Ship's Keel, and comes up on the other Side of the Ship, where 'tis nail'd fast with Spikes ; and this they call a *Stirrup*.

**STOAK'D** : *The Ship is Stoak'd*, or a-*Stoak* ; that is, when the Water in the Bottom of the Ship, cannot come to the Well of the Pump.

*The Limber-Holes are Stoak'd* ; that is, when the Water cannot pass thro' them.

*The Pump is Stoak'd* ; that is, when something is got into it, which choaks it up, so that it will not work.

**STOCKS** ; is a Frame of Timber, and great Posts, made a-Shore, to Build *Pinnaces*, *Ketches*, *Boats*, and such Small-Crafts, and sometimes Small *Frigats*.

*A Ship is on the Stocks* ; that is said of a Ship when she is a Building.

**STOCK** of an *Anchor*. See *Anchor*.

**STOP** a *Leak*. See *Leak*.

**STOP** : *To Stop the Ship* ; that is, when she comes to an *Anchor*, and the Cable is veer'd out but by degrees, till the Ship Rides well.

**STOP!** is a Word also, used by him that holds the *Half-Minute-Glass*, in Heaving the *Log* : For as soon as the Glass

is out, he calls, *Stop!* to them that let run the Line.

**STOPPER**, is a Piece of Rope, in a Ship, having a *Wail-Knot* at one end, with a *Lannier* spliced into it ; and at the other end 'tis made fast in the Place where 'tis to be used : It serves to stop the *Main-Halliards*, or the *Cable*.

The *Stopper* for the *Halliards*, is fasten'd at the *Main-Knight* ; and it serves, when they are Hoisting the *Main-Yard*, to Stop it, while the Men that *Hale*, may stay and rest a little. But 'tis chiefly used for the *Cable*, to stop it, that it don't run out too fast.

*Lay on the Stopper!* That is, Bind the *Wail-Knot* about the *Cable* with the *Lanniers*, and that Stops it, so that it can't slip away. This *Stopper* is fasten'd to the bottom of the *Bits*, by the *Decks*.

*The Ship Rides by the Stoppers* ; that is, when the *Cable* is fasten'd or *Stay'd* only by them, and not *Bitted* : But this is not safe Riding, in a *Stress* of *Weather*.

**STOW** : *To Stow*, is to put the *Goods*, in order, into the *Hold* of the Ship ; the most *Ponderous* and *Heavy*, next the *Ballast*.

**STOWAGE** ; the putting of *Goods* into the *Hold* of the Ship.

**STORM**, or *Tempest*, is well known to be, a violent *Wind*, which raises the *Sea* to a high degree.



degree of Rage and Foam, and endangers all Ships that lie under it, by its exceeding Breaks. In this Case, a Ship that has Sea-Room enough, 'tis best to let her Top-Masts stand, for then she will make better way thro' the Sea.

STRAIT, is a Narrow Sea, shut up between Lands on either Side, affording a Passage from one Great Sea into another.

*In EUROPE there are,*

The Straits of Dover, joining the German Sea to the English Channel.

The Straits of the Sound, joining the Danish to the Baltic Sea.

The Straits of Gibraltar, joining the Mediterranean to the Western Ocean.

The Straits of Caffa, joining Palus Meotis to Pontus Euxinus, or the Black Sea.

The Thracian Bosphorus, joining the Black Sea to the Propontis.

The Hellespont, joining the Propontis to the Archipelago.

The Veer of Messina, joining one Part of the Mediterranean to another.

*In ASIA, there are,*

The Straits of Sunda, joining the Eastern and Indian Ocean.

The Straits of Ormus, joining

the Gulf of Persia to the Southern Ocean.

*In AFRICA, only,*

The Straits of Babelmandel, joining the Red-Sea to the Eastern Ocean.

*In AMERICA, there are,*

The Straits of Magellan, joining the Vast Eastern and Western Ocean.

Davies's Straits, joining Baffin's Bay to the Eastern Ocean.

Hudjon's Straits, joining Button's Bay to the Eastern Ocean.

STRAKE, is a Seam between two Planks.

Garboard-STRAKE, is the first Seam next the Keel.

The Ship heels a-Strake; that is, the Ship hangs or inclines to one Side the Quantity of an whole Plank's Breadth.

STRAP, in a Ship, is the Rope which is spli'd about any Block; and made with an Eye, to fasten it any where on Occasion.

STREAM-Anchor, is only a small one made fast to a small Stream-Cable, for a Ship to Ride by in gentle Streams, and in Fair Weather, when they would only stop a Tide.

STREAMERS, the same with Pendants.

STRETCH; as, Stretch forwards the Halliards, or Sheets! that signifies, (in Hoisting the

Yard, or Haling the Sheat,) that the Part which the Men are to *Hale* by, should be put into their Hands, in order to their *Hoising*, or *Haling*.

**STRIKE**, is a Word varioussly used at Sea; as

*The Ship strikes*; that is, when a Ship in a Fight, or on meeting with a Man of War, lets down or lowers her Top-Sails, at least half Mast high, which is called *Striking the Top-Sails upon the Bunt*; and signifies, that she yields or submits, or pays her Devoir to that *Man of War* she passes by.

**STRIKE**; it is also said, that *the Ship strikes*, when she touches Ground in Shoal Water.

**STRIKE the Top-Mast!** That is said, when any Top-Mast is to be taken down.

**STRIKING down**, of any thing, *into the Hold*; that is, to let or lower down any thing into the Hold.

**STRIP**; As, *the Chase Strips himself into Short or Fighting-Sails*; that it, puts out his Colours in the Poop; his Flag in the Main-Top; his Streamers or Pendants at the End of his Yard-Arm; Furls his Sprit-sail; Peeks his Misen, and Slings his Main-Yard. In which Case, the Chaser must provide himself to Fight.

**STUDDING-Sails**. See *Sails*.

**SUN's Altitude or Height**, is an Arc of a Vertical Circle intercepted between the *Sun* and the *Horizon*.

**SUN's Meridian Altitude**, is an Arc of the *Meridian* intercepted between the *Sun* at Noon, and the *Horizon*.

This is easily found by means of a *Quadrant*, *Cross-Staff*, or the like *Instrument*; when an *Observation* can be made, in order to get the *Latitude of the Place*. See *Observation*.

**SUN's Amplitude**, is an Arc of the *Horizon* intercepted between the *East* and *West Point* and the Place of the *Sun's Rising* and *Setting*. 'Tis useful for finding the *Variation of the Compass*. See *Variation*.

And the *Sun's Amplitude* is readily found (having the *Latitude* and *Declination* given) by this

Proportion.

As the *Cosine of the Latitude of the Place*,  
Is to the *Radius*,  
So is the *Sine of the Sun's Declination*,  
To the *Sine of the Sun's Amplitude*.

**SUN's Azimuth**, is an Arc of the *Horizon* intercepted between the *Meridian* and the *Vertical Circle* which passes thro' the Centre of the *Sun*. It serves chiefly for to find the *Variation of the Compass*. See *Variation*.

And having the *Latitude of the Place*, *Sun's Declination* and *Altitude* given; his *Azimuth* is found by this **RULE**.

Add



Add the Complements of your Data together, and find the Difference between their Half-Sum and the Co-Declination.

Then set down the Logarithm-Sines of the Half-Sum, and Difference found.

As also the Arithmetical Complement of the Logarithm-Sines of the Co-Latitude and Co-Altitude :

And twice the Complement of the Arc answering to  $\frac{1}{2}$  the Sum of these four Logarithms, (taken among the Sines) is the Azimuth sought.

**SURFF** of the Sea, is the great Breakings, or Rolling of the Sea against some Shores; making it dangerous Landing in such Places.

**SURGE**; that is, a Wave or Billow of the Sea.

**To SURGE**: As, the Cable Surges; that is, slips back a little, when there is Heaving at the Capstan.

**SURGEON**, or *Chirurgion* of a Ship, is he that attends and administers Physick to the sick, and takes care of the wounded: Therefore his Chest ought to be well furnish'd with all Necessaries proper for the Climate the Ship is bound to; The Neglect of which has bin the Loss of of many Men's Lives: Besides 'tis well known, That many of the *Surgeons*, but more especially their *Mates* (who are their *Assistants*) which are employed in the Fleet, are not altogether so well Qualified as they ought

to be; and yet the Poor Men are forc'd to depend on their Skill, not only in Surgery, but in Physick also, in the Absence of a Physician: And it may be question'd whether there are many of the Ablest of the *Sea-Surgeons*, Qualified to judge nicely of many Distempers incident to a Sailor, therefore they must, if not so Qualified, be greatly to seek for proper Remedies.

**SWABBER**, is an Inferior Officer a board a Man of War; whose Business is to see that the Ship be kept Clean and Neat; in order to which, he is to see her well wash'd once or twice a Week at least: And he ought to burn Pitch, or some such thing, now and then between the Decks, to prevent Infection; and to acquaint the Commanding Officers of such as are Nasty and Offensive.

**SWEEP**: as the Sweep of the Ship, or Sweep of the Futtocks; that is, the Mould of a Ship when she begins to Compass in at the Rung-heads.

**SWEEPING**; that is, dredging along the Ground, at the Bottom of the Sea, or Channel, with a Three-flook'd Grapnel, to find some *Hawser*, or *Cable*, which is slip'd from an Anchor.

**SWIFTERS**, are Ropes belonging to the Main-Masts, and Fore-Masts; they serve to succour and strengthen the Shrouds, and to keep the Masts stiff: They have Pennants fasten'd

under the Shrouds at the Head of the Masts, with a double Block thro' which the Swifter is Reeve'd, which at the standing Part has a single Block with a Hook hitch'd in a Ring at the Chain-Waile; and so the Fall being Haled up, helps to strengthen the Mast; and 'tis belay'd about the Timber-heads of the lower Rails aloft.

**SWIFTING of a Boat,** is Compassing her Gun-Wall round with a good Rope, to strengthen her in stress of Weather, that she be not shatter'd by the Violence of the Sea.

**SWIFTING the Capstan Bars,** is straining a Rope all round the outer Ends of the *Capstan-Bars*, in order to strengthen them, and make them bear all alike, and together when the Men heave or work there.

**SWIFTING of a Ship,** is either bringing her a-ground, or upon a Carreen.

**To SWIFT the Masts:** In Swiftening of a Ship, to ease and strengthen the Masts, that all the Weight may not hang by the Head, and to keep them from Rising out of the Step: All the Pennants of the *Swifters* and *Tackles* are laid close to the Mast with a Rope, and as near to the Blocks as can be; then the Tackles are carried forwards, and hal'd down, as tau't as possible.

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**TACK,** is a great Rope with a Wale-Knot at one End, which seiz'd into the Clew of the Sail, so is Reeve'd thro' the *Cheffe-Trees*, and then is brought thro' a Hole in the Ship's-Side. It serves to carry forward the Clew of the Sail, to make it stand close by a Wind. The *Tacks* of a Ship are usually belay'd to the *Bitts*, or else there is a *Chevel* on purpose to fasten them; they belong only to the *Main-Sail*, *Fire-Sail*, and *Misen*. When the Sails are to be Trimm'd so as to stand close to a Wind: Then

The *Main*, *Fore*, and *Misen-Tack* are brought close by the Board, and over-hal'd as forward as they can be;

The *Bowlings* are so also on the *Weather Side*;

The *Lee-Sheats* are Haled close Aft.

As also the *Lee-Braces* of all the Sails are likewise Braced Aft: And the *Top-Sails* are Braced and govern'd, as the Sails where-to they belong.

*Hale aboard the Tacks!* That is, bring the *Tack* down close to the *Cheffe-Trees*.

*Ease the Tack!* That is, slacken it, or let it go, or run out

*Let rise the Tack!* That is, Let it go all out.



*The Ship Sails, or Stands close upon a Tack; that is, close by the Wind.*

To TACK about; is to bring the Ship's-Head about, so as to lie the contrary way: Which is perform'd thus;

First, Make the Ship Stay; and when she is Stay'd, they say she is Pay'd.

Then, *let Rise, and Hale!* That is, Let the Lee-Tack Rise, and Hale aft the Sheats; and so Trim all the Sails, by a Wind as before: For they cast off that which was before the *Weather-Bow-line*, and set up the other *Tau't*.

And thus they do also by all *Sheats, Braces, and Tacks*, which a Ship that is Trim'd by a Wind must have.

TACKLES, are Ropes running in three Parts; having a *Pennant* with a Block at one end; and a Block with a Hook at the other end, to hang any Goods upon, which is to be Heav'd in, or out of the Ship. And there are several sorts of *Tackles*: As,

*Boat's and Bres TACKS*, made fast to the *Main and Fore-Shrouds*, to Hoise the Boat in, or out: And to keep firm the *Masts* from from *straying*; as also, for many other Uses

*Ground-TACKLE* See *Ground*.

*Gunner's-TACKLES*, serving for Haling the Ordnance in or out.

*Winding-TACKLE*; is a *Tackle* that serves as a *Pennant*, with a great *Double-Block* and Three

*Shivers* in each, seiz'd fast to the end of a small Cable about the Head of the Mast: It has a Guy brought to it from the *Fore-Mast*. Into this Block there is reev'd a *Hawser*, which is also reev'd thro' another *Double-Block*, having a *Strap* at the end of it; which being put thro' the Eye of the *Slings*, is lock'd into it with a *Fidd*, in order to Hoise in Goods.

The Fall of this *Tackle* is reev'd into a *Snatch-Block*, and so is brought to the *Capstan*, whereby the Goods are Heav'd.

There is also another *Tackle*, call'd *Burton*; which see under the word *Burton*.

TAFFEREL, is the uppermost Part, Frame or Rail of a Ship, abaft over the Poop.

TALLY *the Sheats!* is a word of Command, at Sea, when the *Sheats* of the *Main-sail* or *Fore-sail* is to be Haled aft.

TAMPION, *Tampkin*, or *Tampin*, is a a Round Piece of Wood made fit for the Mouth of any Great Gun: It serves to stop it, so that no *Sea-Water* or *Rain* may get in to wet the Powder.

TAR PAWLING, is a Piece of *Canvase* well *Tar'd* over, to lay on or over any Place, to keep off *Rain*.

And a *Downright Seaman*, that has bin all his *Life-time* bred up to the Sea, is call'd, in a *Burlesque Sence*, *Tar-Pawling*; as when we say, *He is a True Tar-Pawling*.

**TARTANE**, is a sort of *Barque*, very common in the *Straits*, and upon the Coasts of *Spain*: They carry One Mast, and generally a Three-Corner'd Sail'd.

**TAUT**, signifies Stiff, or Fast; As,

*Hale Tau't a Rope!* That is, Set it Stiff, or Strait.

*Set Tau't the Shrouds, or Stays!* That is, Let them be more Tight and Stiff, that are too-Slack, and Loose.

*Wind-TAUT.* See *Wind*.

**TAUNT**: *The Ship is Taunt-Masted*, or her Masts are very *Taunt*; that is, Her Masts are too Tall for her.

**TEMPEST.** See *Storm*.

**TENDERS**, are Small Ships employ'd in the Service of *Men War*, for Carrying of Men, Provision, or whatever else is necessary.

**THAUGHTS**, or *Thoughts*, are the Benches on which the Rowers Sit in a Boat to Row; or the Rowers Seats, in a Ship's-Boat.

**THOWLES**, are those Pins in the Gunnel of a Boat, against which the Rowers bear the Oars, or between which they put their Oars, when they Row.

**THWART** *the Hawse.* See *Hawse*.

*Ride a-THWART.* See *Ride*.

**TIDE**, signifies, as well the *Ebbing*, as the *Flowing* of the Sea.

**TIDE of Flood**, so is the *Flowing* of the Sea call'd.

**TIDE of Ebb**; that is, the *Ebbing* or *Réflux* of the Sea. See *Ebb*.

A *Windward TIDE*, is when the *Tide* runs against the *Wind*; this makes the Water, generally, Rough.

*Leeward-TIDE*, is when the *Wind* and *Tide* go both together the same Way.

*Spring-TIDES*, are the *Tides* at *New* and *Full Moon*: They *Flow* Highest, and *Ebb* runs Strongest. See *Spring*.

*Neap-TIDES*, are the *Tides*, when the *Moon* is in the *Second* and *Last Quarter*; being neither so High, nor so Swift as the *Spring-Tides*.

**TIDE-Gate**; - that is, where the *Tide* runs very strong.

To **TIDE** *it over*, or *up* into any Place; is to go with the *Tide of Flood*, or *Ebb*, as long as that lasts, then to stay at an Anchor all the Time the contrary *Tide* lasts, and the next *Tide*, set in again, till the same *Tide* returns: Thus one may often-times work against the *Wind*, if it don't Over-blow.

*It Flows Tide and Half-Tide*; that is, it will be *Half-Flood* by the Shore, before it begins to Flow in the Offing: Or it will be *High-Water* sooner by Three Hours at the Shore, than at the Offing.

*They brought the Tide along with them*; that is, (speaking of a Ship that came into the Harbour, over a Bar, or Sand,) They came in with the *Flood*.

*Eddy-*



*Eddy-TIDE.* See *Eddy*.

And the *Flux* and *Reflux* of the Sea, is occasion'd by the Water, (if supposed to cover all our Globe,) its putting on two Oblong Spheroidal Figures, whose Axes produced, would pass thro' the Moon and Sun. This Spheroidal Figure of the Ocean, being stretch'd out like two Mountains, the one towards the Moon, and the other to the Part opposite to her, is continually shifting, according to the Daily Motion of the Moon, which it follows; Or rather, The Earth, from its Diurnal Motion, shifts its self away from these Mountains of Water, which keep, as it were, Immoveable under the Moon. Therefore, it follows, that the Waters twice Rise and Fall in 25 Hours; in which Time the Moon is suppos'd to move from the Meridian of any Place, to the same again.

And since the Waters also will swell in those Places to whom the Sun is in the Zenith or Nadir, tho much less than when the Moon is so posited; therefore, in the Conjunction and Opposition of these Luminaries, the aforesaid Protuberances of the Water will be conjoin'd; and consequently, cause then the Highest *Spring-Tides*; for the Water is then Elevated by the conjoint Forces of both: So that the Lowest Ebbs will be when both those Luminaries are in the Horizon of any Place; for the Water is now Depress'd by the conjoint Force of both.

Also, in the Quadratures of the Luminaries, the Sun Elevates the Water where the Moon makes it Fall, and makes it Fall where the Moon Elevates it: So that the Elevation of the Water, depending only on the Difference of these Forces, will be the least of all; and so for the Depression.

And when the Moon is in the Equinoctial, the two opposite Protuberances of the Water, will be also in the Earth's Equator, and each of them describing that Great Circle of the Earth, by its Diurnal Revolution, it will move swifter; and when it is thrown towards the Shores, will rise higher there. Also, something must be allow'd for the Equatorial Diameter of the Earth, being its longest, and consequently the Water there being something nearer to the Luminaries, will, by their Influence, be raised higher, than in other Parts.

So that whenever the Luminaries are either in Conjunction, or Opposition, in the Equator, their Forces will be conjoin'd to Raise or Elevate the Sea at the Equator; as happens at the *Syzygies* next the Equinoxes, or in or near *March*, or *September*, when there is always the greatest *Annual Tides*.

All these Things would regularly come to pass, if the whole Earth were cover'd with Water very deep: But by reason of the Shoalness of some Places,

Narrowness of the Straits, of Islands, &c. there will be an infinite Variety in the *Phænomena* of the *Tides*, which are not to be accounted for, without an exact Knowledge of all the Circumstances of the Places; as of the Position of the Land, and of the Breadth and Depth of the Channels by which the *Tide* Flows, &c.

**TIES**, are those Ropes by which the Yards do hang; and when the Halliards are strain'd to Hoise the Yards, these *Ties* carry them up.

The *Main-Yard* and *Fore-Yard-Ties* are first reev'd thorow the Ram's-Head, then thorow the Hounds, with a Turn in the Eye of the Slings made fast to the Yard.

The *Mizen-Yard* and *Top-Yard* have but single *Ties*.

The *Spritsail-Yard* has none; being made fast to the *Bow-sprit* with a Pair of Slings.

**TILLER**, the same with the *Helm* of a Ship: It is most properly used in a Boat, where that which would be the *Helm* of a Ship, is call'd the *Tiller*, and serves for the same Use.

*Tilt-Boats*, are those which have Bails or Hoops over the Stern, cover'd with a Tar-Pawling, or the like; and this so set up, is call'd the *Tilt* of the Boat; as is common in *Wherries*.

**TIMBERS**: In a Ship, there are the *Floor*, or *Ground-TIMBERS*,

which form the *Floor* of the Ship: These *Timbers* are straight, except at the Ends, where they begin to Compass; they lie on the Keel, and are fasten'd to it with Bolts thro' the Keelson; and are call'd *Ground-Timbers*, because the Ship rests upon them when she is a-Ground.

*Knee-TIMBERS*. See *Knee*.

*Rising-TIMBERS*, are the Hooks placed on the Keel: They are so call'd, because as these Rise in Proportion, so the Ship's *Rake* and *Run* Rise on her Flat-Floor by degrees.

**TIRE**, or *Teer of Guns*, is a Row of them placed along the Ship's-Side, either above upon Deck; or below.

Also, Three-Deck'd Ships have Three *Tire of Guns*, call'd the *Lower*, *Second*, and *Third* or *Upper Tire*: The *Lower-Tire* have, generally, the Greatest Guns; and *Upper-Tire*, the Smallest.

*Half a TIRE*: The Fore-Castle and the Half-Decks are also furnish'd with *Half a Tire of Guns*.

**TITE**, or *Tight*: As, *The Ship is Tite*; that is, She is so staunch, as to let in but little Water: And this is known by the Smell of the Water Pump'd out; for if she let in but little Water, it will always Stink, otherwise not.

**TON**, or *Tun*, is a certain Weight by which the Burden of Ships are Estimated, and is *Twenty-Hundred Weight*, or 2240 Pounds *Averdupoise*.

**TONNAGE**,



TONNAGE, is a Custom, or Impost paid to the King, for Merchandise carry'd out, or brought in Ships, and such-like Vessels, according to a certain Rate upon every Ton.

TOP of a *Ship*, or *Round-Top*, is a Round Frame of Boards lying upon the Cross-Trees, near the Head of the Mast; where the Men may stand to Furl and Loose the Top-sails, &c.

TOP-ARMINGS, are a sort of Cloths hung about the *Round-Tops* of the Masts, for Show; and also to hide the Men which are at the *Top*, in a Fight; who lie there to sling Stink-Pots, &c. or to fire Small-shot down on the Enemy, in case of Boarding.

*Man the TOP!* See *Man*.

TOP-GALLANT-MASTS of a Ship, are those two, *viz.* *Main-Top-Gallant-Mast*, and *Fore-Top-Gallant-Mast*: Which are small round Pieces of Timber, set on their respective *Top-Masts*; having on their *Top* the Flag-Staffs set, on which the *Colours*, as *Flags*, *Pendants*, &c. hang.

TOP-MASTS of a Ship, are these Four, *viz.*

*Main-Top-Mast,*  
*Fore-Top-Mast,*  
*Mizen-Top Mast,*  
*Sprit/sail-Top Mast,*

Which are made fast, and settled unto the Heads of the *Main-Mast*, *Fore-Mast*, *Mizen-Mast*, and *Bow-sprit* respectively.

TOP-MARTNETS. See *Martnets*.

TOP-ROPES, are those with which, the *Top-Masts* are Set, and Struck.

They are reev'd thro' a great Block, which is seiz'd on one side under the Cap; and they are reev'd thro' the Heel of the *Top-Mast*, where there is a Brass-Shiver plac'd athwart Ships; after this they are brought up, and fasten'd on either side of the Cap with a Ring: The other Part of them comes down by the *Ties*, and so is reev'd into the *Knight-head*; and when it is to be Heav'd, 'tis brought to the Capstan:

These *Top-Ropes* belong only to the *Main-Mast* and *Fore-Mast*.

TOP-SAILS, and *Top-Gallant-Sails*. See *Sails*.

TOP-SAIL-LIFTS. See *Lifts*.

TOP the *Yard Arms!* That is, Make the Ends of the Yards hang Higher, or Lower. See *Yards*.

TOP a-*Starboard!* That is, Hale upon the Larbord-Lift.

TOPPING the *Lifts*; that is, Haling of the *Top-sail-Lifts*.

TORNADO'S, the same with *Turnad's*.

TOUCH: As, *Touch the Wind!* That is, Keep the Ship near the Wind; as the Method is, in Sailing against the Wind.

TOW: *To Tow*, signifies, to Draw or Drag any Thing after the Ship.

To *Tow* a Ship, or Boat ; That is, to Draw them with a Rope, after the Ship ; then they are said to be *Tow'd*, or to be in her *Tow*.

TRADE-Winds. See *Winds*.

TRAIL-Board, is a Carv'd Board on each side of the Ship's Beak, reaching from her *Main-Stem* to the Figure, or to the *Brackets*.

TRANSOM, is a Piece of Timber that lies a-thwart the Ship's Stern, between the two *Fashion-Pieces*, directly under the *Gun-Room-Port* ; and it lays out the Breadth of the Ship at the *Buttocks* : As when a Ship is built Broad or Narrow at her *Transom*, she is said to have a Broad or a Narrow *Buttock*.

TRANSOM, is also the Vane of a *Cross-Staff*, which is made to slide along upon the *Staff*, by means of a *Square Socket* ; and may be set to any of the *Graduations* thereon, in an *Observation*.

TRAVERSE, is the Way of a Ship, when she makes Angles in and out, and cannot keep directly to her *True Course* ; because of the *Shifting* of *Winds*, &c.

And in *Sailing* by, or against the *Wind*, there should be an *Allowance* made for *Leeward-Way*, and that according to the *Mould* of the Ship, the *Sail* she Bears, the *Growth* of the *Sea*, &c.

*Resolving*, or *Working* a *Traverse*, is the *Reducing* of these *Courses*, found by the *Compass* ; and *Distances* found by the *Log*, into one *Course* and *Distance* : And that is done after this manner :

1. Make a *Table*, consisting of *Six Columns* ; in the *First Column* set the several different *Courses* of your *Day's Sailing*.

In the *Second Column*, over-against the respective *Courses*, set the *Distances* in *Miles* ; and let the other *Columns* be titled at the *Top*, with *South*, *North*, *East*, *West*.

2. By the *Table* of *Difference of Latitude* and *Departure*, found in most *Books* of *Navigation*, seek the *Difference of Latitude* and *Departure*, for each *Course* and *Distance*, in your *Traverse* ; and set each *Difference of Latitude*, as the *Course* is *South* or *North*, under *Southing* or *Northing* : Also, set each *Departure*, as the *Course* is *East* or *West*, under *Easting* or *Westing*, respectively.

3. Add up the *Northings* and *Southings* ; their *Difference* will be the *Difference of Latitude*.

And add up the *Eastings* and *Westings* ; their *Difference* also, will be the *Departure* sought.

4. With this *Difference of Latitude* and *Departure* found : The *direct Course* and *Distance* is



is readily had, either by the *Traverse-Table*, *Gunter's scales*, or *Logarithms*.

**TRAVERSE-Table**, is the same with the *Table of Difference of Latitude and Departure*, in Books of *Navigation*; being only the *Difference of Latitude and Departure* ready Calculated to every *Degree, Point, Half-Point, and Quarter-Point* of the *Quadrant*, and for any *Distance* under 100 Miles, tho' it may conveniently serve for more.

This *Table* is one of the most necessary Instruments, that a *Navigator* has occasion for; since by this he may readily reduce all his *Courses and Distances*; run in the space of 24 *Hours*, into one *Course and Distance*; whence the *Latitude* he is in, and his *Departure* from the *Meridian* is found; and not only that, but the *Difference of Longitude* is gain'd also by Inspection, and that near enough for a *Sailor's Purpose*, in common and daily Practice. See *Longitude*.

**TRAVERSE-Board**, is a little round Board hanging up in the *Steerage* of the Ship, or elsewhere, and bored full of Holes upon Lines, shewing the Points of the *Compass*: And upon this Board, the *Steers-man* keeps an Account how many *Glasses* (that is, *Half-Hour*.) the Ship *Steers* upon any Point, by moving a little Peg from *Hole* to *Hole*.

**TRAVERSE, To Cast a Point of Traverse.** See *Cast*.

**TRAVERSE**, also signifies to turn or remove a Piece of *Ordnance*, this, or that way, in order to bring it to *Bear*: and this is called *Traversing the Piece*.

**TRAVERSE the Yard!** that is, Brace it *Aft*.

**TREE-NAILS**, or *Trennels*, are long Pins, or Nails of Wood, made out of the Heart of *Oak*, to fasten the Planks to the *Timbers*; and these have always *Oakum* driven with them, to prevent any *Leak*.

**TREES, in a Ship**: Of *Timbers* so called, there are several, as

**CHESS TREES**, are *Timbers* on each Side of the Ship, for the *Main-Tack* to run thro' and to *Hale* it down to. See *Chefs*.

**CROSS-TREES.** See *Cross*.

**ROUFE-TREES**, are small *Timbers* that bear up the *Gratings* from the *Half-Deck* to the *Fore-Castle*; supported by *Stations* that rest upon the *Half-Deck*.

**WASTE-TREES**, are those *Timbers* of a Ship that lie in the *Waste*.

**TRESSEL-TREES**, are those *Timbers* of the *Cross-Trees*, that stand along Ships, or *Fore* and *Aft* at the Top of the *Mast*. See *Cross-Trees*.

**TRICE**, or *Trise*, signifies, haling up any thing by a *Dead Rope*, or one that does not run in a *Block*; But is done by hand, or by main *Strength*: So if any *Chest, Cask, or other Goods*, has only a *Rope* made fast to it, and is pulled up

up by hand into the Ship, without a Tackle, then they say, 'tis *Tis'd up*.

**TRIM** of a Ship, is her best Posture, Proportion of Ballast, and hanging of her Masts, &c. for Sailing.

To find the *Trim* of a Ship; that is, to find the best Way of making any Ship Sail swiftly, or how she will Sail best.

This is done, either by trying her Sailing with another Ship, so many Glasses *Trimm'd* a Head, so many a-Stern, and so many upon an even Keel: Or else by easing of her Masts, and Shrouds; some Ships Sailing much better when Slack, than when they are Tau't.

But this depends very much upon Experience and Judgment, and the several Trials and Observations which the Commander and other Officers may make a-board.

**TRIP**; as the Ship goes with her Top-Sails a-Trip; that is, when she carries her Top-Sails hoisted up to the highest, and when it blows not too hard, but a gentle or Loom-Gale.

**TROPICS**, or *Tropicks*, are two Circles supposed to be drawn parallel to the *Equinoctial*, at 23 degrees and 30 minutes distant from it.

These Circles are term'd the Limits of the Sun's Progress; for between them the Sun is supposed to have his continual Course,

and never exceeds beyond any of them.

**TROPIC** of *Cancer*, is that Circle which is suppos'd to be drawn parallel to the *Equinoctial Northward*, 23 degrees 30 minutes distant from it; and therefore is called the *Northern Tropic*; it passes thro' the Beginning of the Sign *Cancer*: And when the Sun comes to this Circle, that is, about the 12, or 13<sup>th</sup> of *June*, it makes the *Summer Solstice*, and the Longest Day (and *Shortest Night*) in the *Northern Hemisphere*; and therefore, the contrary in the *Southern* one.

**TROPIC** of *Capricorn*, is that Circle which is suppos'd to be drawn parallel to the *Equinoctial Southward*, about 23 degrees, 30 minutes distant from it, and therefore is called the *Southern-Tropic*; it passes thro' the Beginning of the Sign *Capricorn*: And when the Sun is said to come to this Circle, that is, about the 12<sup>th</sup> or 13<sup>th</sup> of *December*, it makes the *Winter Solstice*, and the Longest Day and *Shortest Night* in the *Southern Hemisphere*; and therefore the contrary in the *Northern* one.

**TROUGH** of the *Sea*, is the Hollow or Cavity made between two Waves or Billows, in a Rolling Sea.

The Ship lies in the *Trough* of the *Sea*; that is, She lies down between two Waves.



TRUCK, is a square Piece of Wood at the Top, wherein the *Flag-Staff* is put.

TRUMPETER, a *Sea-Trumpet*, whose Office is always to attend the Captain's Command; to be ready at the Entertainment of Strangers: Also when a Ship is Haled; and an Enemy's Ship Charg'd, Boarded or Enter'd. The Poop is his proper Station.

TRUCKS, belonging to the Carriage of a Piece of Ordnance; are the Wheels which are on the Axle-Tree, to move the Piece.

TRUNDLE-*Shot*. See *Shot*.

TRUNNIONS, are Pieces of well-season'd Wood, to make fast the Ship's Timber with.

TRUNNIONS, of a Piece of Ordnance, are those Nobs or Bunches of the Gun's Mettal, which bear it up upon the Cheeks of the Carriage.

TRUSSES; are Ropes made fast to the Parrels of a Yard in a Ship; they serve either to bind the Yards fast to the Masts, when the Ship rolls, lying either a-Hull, or at Anchor; or to Hale down the Yards in a Storm, or Gust of Wind.

These *Trusses* belong to the *Main-Yard*, *Fore-Yard*, and *Misen*; and are all brought to upon Occasion.

TRY; as the Ship lies a-Try under a (*Main-Sail*, or) *Main-Course*; that is, when she has

no Sails abroad, but her *Main-Course*; the Tacks Hal'd close aboard; the Bow Lines set up; the Sheats haled close Aft; and the Helm tyed down close by the Board; and so she is let lie in the Sea: But at this time, if she be upon a Wind, she usually makes her Way good, near Three *Points* before the Beam.

*To Try under a Misen-Sail*: This is done when it blows so hard, that they cannot maintain the *Main-Sail*; that is, cannot bear the *Main-Sail* out: And then, if she lie close by the Wind, she'll make her Way about Two *Points* before the Beam.

But if she *Try under a Main-Sail and Misen*, she'll make her Way good about Four *Points* before the Beam.

If the Ship will neither *Try* nor *Hale*, then *Sprom*; that is, put her Right before the Wind.

TUCK of a Ship, is the gathering up of the Works upon her Quarter under Water; which if it lie too low or too deep, makes her have a broad or a flat Quarter, and hinders her Steering, by keeping the Water from passing swiftly to the Rudder: But if it lie too high above the Water, she must be laid out in that Part, otherwise she will want Bearing for her After-Works.

TURN, as *Land-Turn*. See *Land*.

TURNA.

**TURNADO'S**; are violent, suddain Gusts of Wind from all Points of the Compass; frequent upon the Coast of *Guinea*.

## V

**V**ALE of a Pump, is the Trough by which the Water runs from the Pump along the Ship's Sides, that it may go out at the Scupper-Holes.

**VAN** of a Fleet. See *Squadron*.

**VANES**; are those Sights which are made to move and slide upon *Cross-Staffs*. See *Quadrants*, &c.

**VARIATION** of the *Magnetic Needle* or *Compass*, is the Deflection of the *Magnetic Needle* from the *True Meridian*; or that Arc of the *Horizon*, either *Eastward* or *Westward*, intercepted between the *True* and *Magnetic Meridian*. See *Compass*.

The *Variation* is found either by the *Sun's Amplitude*, or *Azimuth*.

1. To find the *Variation* of the *Compass* by the *Sun's Amplitude*, and *Magnetic Amplitude*.

**RULE**. If the *Amplitudes* be of one Kind, that is, both *North*, or both *South*, their *Difference* is the *Variation*.

But if the *Amplitudes* be of

different Kind, that is, one *North*, the other *South*, their *Sum* is the *Variation*.

And in counting both *Amplitudes* from the *North*, Observe that,

If the *Magnetic Amplitude* be to the *Right* of the *True Amplitude*, the *Variation* is *West*; but if to the *Left*, the *Variation* is *East*.

How the *Sun's Amplitude* is found, see *Sun*.

But the *Magnetical Amplitude* is found, by Observing, with a *Compass* for that Purpose, on what Point thereof the *Sun* Rises, or Sets: And the *Observation* should be made when the *Sun's* under-Limb is about  $\frac{2}{3}$  of his *Diameter* above the *Horizon*; because of the *Refraction*, and the *Height* of the *Observer's Eye* above the *Surface* of the *Water*.

2. To find the *Variation* of the *Compass* by the *Sun's Azimuth*, and the *Magnetic Azimuth*.

**RULE**. In counting both *Azimuths*, from the *North* in *North Latitude*, or *South* in *South Latitude*, and their *Difference* is the *Variation*.

And if the *True Azimuth* be to the *Right* of the *Magnetic Azimuth*, the *Variation* is *East*; But if to the *Left*, 'tis *West*.

The chief Use of Knowing the *Variation* at sea, is to Correct the *Courses* of *Ships*. For if the *Variation* of the *Compass* be not allow'd,



allow'd, all Reckonings must be Erroneous.

And if the *Variation* of the *Compass*, and *Course* Steer'd upon, be given ; the *True Course* is found by this **RULE** :

If the *Course* and *Variation* be of the same Kind, their Sum is the *True Course* :  
But if Different Kind, their Difference is the *True Course*.

And this *Correction* of the *Course*, is in no Case so necessary, as in running on a *Parallel East* or *West* to hit a *Port* : For if being in your *Latitude*, at the Distance of 70 or 80 Leagues, you allow not the *Variation*, but Steer *East* or *West* by *Compass*, you shall fall to the *Northward* or *Southward* of your *Port*, on each side 19 Leagues of Distance, one  *Mile* for each *Degree* of *Variation*, which may produce very dangerous Errors, where the *Variation* is considerable.

As for Instance ; Having a good Observation in *Latitude* 49 deg. 40 min. about 80 Leagues without *Scilly*, and not considering that there is 8 deg. *West Variation*, I Steer away *East* by *Compass* for the *Chanel* ; but making my Way truly *East* 8 deg. *North*, when I come up with *Scilly*, instead of being 3 or 4 Leagues to the *South* thereof, I shall find my self as much to the *Northward* : And

this Evil will be more, or less, according to the Distance you sail in the *Parallel*. And therefore, to keep your *Parallel* truly,

You must go so many *Degrees* to the *Southward* of the *East*, and *Northward* of the *West*, as is the *West Variation* : But contrariwise, so many *Degrees* to the *Northward* of the *East*, and *Southward* of the *West*, as there is *East Variation*.

**VARIATION - CHART**, Design'd by Capt. *Halley* : The Projection thereof is according to *Mercator's*; and the Situation and Form of the Surface of the *Terraqueous Globe*, as to its Principal Parts, and the Dimensions of the several *Oceans*, are therein ascertain'd with the utmost Accuracy, as well from *Astronomical Observations*, as from *Journals*. And the *Curve-Lines* drawn over the several Seas, shew the *Degrees* of the *Variation* of the *Magnetical-Needle*, or *Sea-Compass*. The *Double Line* passing near *Bermudas*, the *Cape Verde Isles*, and *St. Helena*, every where Divides the *East* and *West Variation* in this *Ocean* ; and that on the whole Coast of *Europe* and *Africa* the *Variation* is *Westerly*, as on the more *Northerly* Coasts of *America* : but on the more *Southerly* Parts of *America* 'tis *Easterly*.

The *Degrees* of the *Variation*, or how much the *Compass* declines from

from the True North on either Side, is reckon'd by the Number of the Lines on each Side of the Double Curve, which is called the *Line of No Variation*; and each Fifth and Tenth is distinguish'd in its Stroak, and numbred accordingly: So that in what Place soever your Ship is, you find the *Variation* by Inspection.

Also in the *Indian Ocean*, where the *Variation* is altogether *Westerly*, encreasing till you come to the Meridian of the *East Part* of *Madagascar*, (where 'tis of about two Points) and from thence it decreases, till you arrive on the *East-Coast* of *China*, or at the *Philippine Isles*.

Here another Double Line on which there is *No Variation* divides again the *West* from the *East Variation*, that in all probability is to be met with almost all over that Immence Ocean called the *Southern-Sea*, where the *Curves of the Variation* are wanting, for want of Accounts and Journals to ascertain them.

In this *Chart*; 'tis plain, that the Degrees of *Westerly Variation*, in the *Mediterranean*, are all mark'd and numbred from  $5^{\circ}$  at *Malaga*, to  $12^{\circ}$  at *Cyprus*. In the *Baltic*, from  $8^{\circ}$  to  $10^{\circ}$ . In the *Red-Sea*, from  $12^{\circ}$  to  $16^{\circ}$ . And in the *Gulf* of *Persia*, from  $13^{\circ}$  to  $14^{\circ}$ ; all *Westerly*.

And at the *Madera*, the Va-

riation is  $3^{\circ} \frac{1}{2}$  *West*; at *Barbadoes*  $5^{\circ} \frac{1}{2}$  *East*; at *Annobon*  $7^{\circ}$  *West*; at *Diego Roiz*  $19^{\circ}$  *West*; at *C. Raze* in *Newfoundland*  $14^{\circ}$  *West*; at the Mouth of *Rio de Plata*  $18^{\circ}$  *East*; at *Java-head*  $2^{\circ} \frac{1}{2}$  *West*, &c.

So that this *Chart*, shewing the *Variation of the Compass* in any Place at Sight, which is unavoidably necessary for correcting the *Ship's Course* at Sea; Therefore, in a continued Cloudy Weather, or where the Mariner is not provided to observe this *Variation* duly, the *Chart* will readily shew him what Allowances he must make for this Default of the *Compass*, and thereby rectify his *Journal*. And besides you may also in many Cases estimate the *Longitude* at Sea; for where the *Curves* run near by *North* and *South*, and are thick together, as about *C. Bonne Esperance*, it gives a very good Indication of the Distance of the Land, to Ships come from far; for there the *Variation* alters a Degree to each two Degrees of *Longitude* nearly: But in the *Western Ocean*, between *Europe* and *North America*, the *Curves* lying nearly *East* and *West*, cannot be serviceable for this purpose.

*Note*, That there is a perpetual, tho' slow Change in the *Variation* almost every where; As that about *C. Bonne Esperance* the *West Variation* encreases at the rate of about a Degree in Nine Years. In the *English Channel*,



*Channel*, it encreases a Degree in Seven Years; but slower the nearer the *Equinoctial Line*, as on the Coast of *Guinea*, a Degree in a 11 or 12 Years. On the *America-Side*, the *West Variation* alters but little; and the *East Variation* on the *Southern America* decreases, the more Southerly the faster; the *Line of no Variation*, moving gradually towards it. In the *Indian Seas*, after you pass *St. Lawrence*, the *West Variation* is on the Decrease, the faster the more Westerly and Southerly; and is in a manner at a Stand, when you come to the Length of *Fava*. Therefore 'twill be necessary in time to alter the whole System from what it now stands in. Where this *Chart* is to be had, see under the Word *Chart*.

**VEER**; As, *Veer out a Rope!* That is, let it go by hand, or let it run out of it self.

**VEER** *more Cable!* That is, let more *Cable* run out.

**VEER** *more Sheat!* That is, let more of it out: And we don't use this Word for letting out of any Running Ropes, except the *Sheat*.

**VEER**, is also used in reference to the Wind: As,

*The Wind Veers*; that is, when it changes often, and suddenly, or shifts from Point to Point.

**VEERING**, as, *the Ship goes Veering*; that is, she goes at large; neither by a Wind, nor

directly before it, but between both; which is also called *Quar-tering*.

**VICE-ADMIRAL**. See *Flag-Officers*.

**VICTUALLING** *the Navy*: This Affair was formerly performed by Contractors, but is now under the Care of Commissioners, who keep their general Office on *Tower-Hill* and have not only their proper Agents at the several *Victualling* Ports in this Kingdom, but also their Correspondence abroad: And indeed it requires more than ordinary Care in supplying the Fleet with good and wholesome Provisions, the Want whereof subjects the Men to so many Distempers. This Care ought to extend it self as well to Quantity as Quality; for as nothing does more discourage a Sailor than his being wrong'd in the First, so is there not any thing subjects them to Diseases so much as a Defect in the Latter.

**VIOL**, a kind of Hawser made use of to purchase in the Cable, when the Main Capstan cannot do it; because the Ground in which the Anchor is let fall, is too stiff, or else the Sea runs too high, so that they cannot weigh it: In which Case they take a Hawser, opening one End of it, they put therein Nippers, of about 8 Fathoms from each other, wherewith they bind this Hawser fast to the Cable, and then bring ic



to the *Fear Capstan*, to heave upon 'it; And this will purchase far more than the *Main-Capstan* can.

## W

**W**AD-HOOK, is a Rod, or Wire of Iron, turn'd Spiral-wire; and its End is put upon a Handle or Staff, to draw out *Wads* or *Oakum*, in unloading a Piece of Ordnance.

**W**AFT; as, *To Waft a Ship*, is to Convoy her safe, as Men of War do by Merchant-Ships.

*To make a Waft*, is to hang out some Coat, Sea Gown, or the like, in the Main-Shrouds of the Ship, as a Sign for Men to come on Board, &c. as signifying ostentines, that the Ship is in great Danger by a Leak, &c. and therefore wants Help from the Shore, or some other Ship.

**W**AIL, the same with *Wale*.

**W**AKE of a ship, is the Smooth Water a-Stern, when she is under Sail: This shews the Way she has gone in the Sea, whereby the Mariners judge what Way she makes. For if the *Wake* be right a Stern, they conclude she makes her Way forwards; But if the *Wake* be to Lee-ward a Point or two, then they conclude she falls to the Lee-ward of her Course.

*The Ship stays to the Weather of her Wake*; that is, when in her staying she is so Quick, that

she does not fall to Lee-ward upon a Tack, but that when she is Tack'd, her *Wake* is to the Lee-ward; then 'tis a Sign that she feels her Helm very well, and is quick of Steerage.

**W**ALE, or *Wail*, the same with *Bends*, which See.

*Chain-WALE*. See *Chain*.

*Gun-WALE*; See *Gun*.

**W**ALE or *Waile-Knot*. See *Knot*.

**W**ALE, or *Wail-Rear'd*; when a Ship is built upright, after she comes to her Bearing, she is said to be *Wale-Rear'd*; the which tho' it be unfightly, and as the Sea-men term it, not *Ship-Shapen*; yet causes a Ship to be much more Roomy, (that is, larger) within Board, and withal, makes her a wholesome Ship in the Sea, especially, if her Bearing be well Lay'd out.

**W**ALT; a *Ship is Walt*, when she has not her due Ballast, that is, not enough to enable her to bear her Sails, and to keep her stiff.

**W**A P, in a Ship, is that Rope wherewith the Shrouds are set Taught with *Wale-Knots*; one End is made fast to the Shrouds, and to the other are brought the *Laniers*.

**W**A R *no more!* is only to bid him at the Helm, to keep the Ship as near the Wind as possible.

**W**ARPING, is to Hale a Ship up by a Hawser, or any other Rope, sufficient for that Purpose, with an Anchor bent to it.

This



This is used, when a Wind is wanting to carry her into, or out of a Harbour.

WARP; so is the Hawser, or Rope us'd to hale the Ship up, call'd.

WAST-BOARDS, are Boards sometimes set upon the Sides of a Boat, or other Vessel, to keep the Sea from breaking into her.

WAST-CLOTHS, are Cloths hung upon the uppermost Work of a Ship's Hull, to shadow the Men from an Enemy in a Fight; and therefore, by some, are call'd the *Fights*.

WASTE of a Ship, is that Part of her between the two Masts, that is, between the *Main-Mast* and *Fore-Mast*.

WAST-TREES. See *Trees*.

WATCH, at Sea, signifies the Space of Four Hours; for Half the Ship's Company, or Crew, (when she is at Sea,) *Watch*, and do Duty in their Turns, so long a Time.

Also, a Ship's Company is divided into Two Parts, call'd the *Larboard-Watch*, and the *Starboard-Watch*.

Quarter-WATCH; that is, when but a *Quarter* of the Ship's Company *Watch* at a time; as when they are in Harbour, having but little to do, or look after.

WATCH-GLASS, being Four Hours, is used at Sea, to Shift or Change their *Watches*.

There are also *Half-Watch-Glasses*; *Minute*, and *Half-Minute-Glasses*; whereby they count the *Knots*, when they Heave the *Log*, in order to find the Ship's Way.

WATER-Born, is said of a Ship, when she is where there's no more *Water* than will just bear her from the Ground.

Dead-WATER; is the *Eddy-Water* that follows the Stern of a Ship, not passing away so fast as that which slides by her Sides.

WATER - Draught. See *Draught*.

Eddy-WATER. See *Eddy*.

Foul-WATER; As, *The Ship makes Foul-Water*. See *Foul*.

High-WATER; that is, when the *Tide* is at the *Highest*.

WATER-Line, is that which distinguishes that Part of a Ship which is *under Water*, from that *above*, when she is duly Laden.

Low-WATER; that is, when the *Tide* is at the *Lowest*.

WATER-Shot, is a kind of Riding at Anchor, when the Ship is Moor'd neither Cross the *Tide*, nor Right up and down, but *Quartering* betwixt both.

WATER-Way, in a Ship, is a small Piece of Timber lying fore and aft on her Deck, close by her Sides, to prevent the *Water* running down there.

To find the Time of High-Water,  
or Full-Sea, at any Place.

The R U L E.

To the Moon's Southing, add the Point of the Compass making Full Sea (on Full and Change-Day) for the Place propos'd; and the Sum is the Time sought.

Note, The Point of the Compass making Full-Sea on the Full and Change-Day, is found in the Tide-Table, in the Seaman's Kalender, and other Books of Navigation.

The Time of the Moon's Southing, is found by this

R U L E.

Multiply the Age of the Moon by 4, and Divide the Product by 5, the Quotient is Hours; and the Remainder is so many times 12 Minutes of an Hour, and both is her Southing sought.

The Moon's Age is found by this

R U L E.

To the Epact Add the Day of the Month, and the Number of the Month; the Sum, if it exceeds not 30, is her Age: But if it does, Subtract 30 as oft as you can, and the Remainder is her Age.

The Numbers of the Months are these:

Jan.	Feb.	Mar.	Apr.
0	2	1	2
May	June	July	Aug.
3	4	5	6
Sept.	Oct.	Nov.	Dec.
8	8	10	10

The Epact is found by this

R U L E.

1. Divide the Golden Number by 3; and Note the Remainder.

2. Multiply that Remainder by 10, and Note the Product.

3. To that Product Add the Golden Number: The Sum (if it exceed not 30) is the Epact; but if it does, Subtract 30 from it, and the Remainder is the Epact sought.

The Golden Number is found by this

R U L E.

Add 1 to the Year of Our Lord, and Divide the Sum by 19; the Remainder will be the Golden Number sought.

WAVES, are the Billows made by the Rolling of the Sea: Their Breadth is estimated to be the Distance between the top Edges of any two Waves;

or



or a Right Line drawn from the Middle of one Trough or Hollow, to the Middle of the other.

And the Velocity of *Waves*, is always in a *Subduplicate Ratio* of their Breadth. Therefore, those *Waves* whose Breadth is  $3\frac{1}{8}$  *Parisian Feet*, will pass over that Distance in a Second of Time; and consequently, in One Minute, will run  $183\frac{3}{4}$  Feet; and in an Hour's Time, will have gone about 11000 such Feet.

**WAY of a Ship:** As, To keep an Account of the Ship's Way, is one of the most necessary Things in the Practice of Navigation; and the most-Approv'd Method of doing this, is by the *Log* and *Log-Line*; which see.

*Lee-WAY*, or *Leeward-Way*, is the Angle made by the *Point Steer'd* upon, and the *Way of the Ship*. And since most Ships are apt to fall a little to *Leeward* of their Course, 'tis necessary, at all time, in Casting up the *Log-Board*, to Allow something for the *Lee Way*. As,

1. If the Ship be upon a Wind, allow One *Point* for *Lee-Way*.

2. If the Wind blow hard, and cause one *Top-sail* to be taken in, allow Two *Points* for *Lee-Way*.

3. If the Wind blow so hard, that both *Top-sails* are taken in, and the Sea run high; allow Three *Points* for *Lee-Way*.

4. If the *Fore-sail* be Furl'd, and the *Try* under a *Main-sail* and *Misen*; she'll make her *Way* Four *Points* before the Beam.

5. If the *Try* under a *Main-sail* only, she will make her *Way* near Three *Points* before the Beam.

6. But if the *Try* under a *Misen* only, she'll make her *Way* about Two *Points* before the Beam.

7. If she lie *a-Hull*, with all her *Sails* Furl'd; she will make her *Way* One *Point* before the Beam.

As may be seen more at large, in Mr. *Jones's Compendium of Navigation*.

**WAY Astward on**, or *Forward on*; that is, the *Rake* or *Run* of a Ship; Which see.

**WEATHER:** As, To *Weather a Point*; that is, to sail by it with a Fair Wind.

To **WEATHER** a Ship, that is, to go to Windward of her.

**WEATHER-Coyle** or *Quail*; that is, when a Ship has her Head brought about, so as to lie that way, which her Stern did before, without loosing of

any Sail, but only by bearing up the Helm.

WEATHER-Gage. See *Gage*.

To WEIGH Anchor. See *Anchor*.

WENDING, signifies, bringing the Ship's Head about ; and seems to be the same as *Winding*.

*How Wends the Ship?* the same with, *How Winds the Ship?*

WEST, is one of the Four *Cardinal-Points* of the World : And is that Point of the *Horizon* where the *Sun* is seen to *Set*, when 'tis in the *Equinoctial*.

WESTERN-Amplitude, is an Arc of the *Horizon* intercepted between the Point of the *Sun's* Rising, and the *West-Point* of the *Horizon*.

WESTERN-Hemisphere. See *Hemisphere*.

WESTING. See *Departure*.

WHELP of the *Capstan*. See *Capstan*.

WHERREYS, are Small Boats employ'd in Rivers ; they are too weak and tender for any Service at Sea.

WHIP, or *Whip-Staff*, is a Piece of Timber like a strong Staff, fasten'd into the Helm, for him that Steers, in small Ships, to hold in his Hand, thereby to move the Helm, and Steer the Ship : It goes thro' the *Rowle*, and is made fast to the *Tiller* with a *Ring*.

WHIRLWIND, a sort of Wind that turns round, and blows divers Ways at once.

WHOLSOM *Ship* ; that is, a Ship that will *Try*, *Hull*, and *Ride* well, without Rolling or Labouring in the Sea. A Long Ship that draws much Water, may *Try*, *Hull*, and *Ride* well ; But if she draw's little Water, she may *Try* and *Ride* well, yet never *Hull* well : And a Short Ship, that draws much Water, may *Hull* well, but neither *Ride* nor *Try* well ; and such is call'd an *Unwholsom Ship*.

WHOODINGS, are those Planks which are join'd and made fast along the Ship's Side into the Stern.

WIND, is defin'd to be the Stream, or Current of the Air ; which blows from some One of the Two and Thirty Points of the *Horizon*, or *Compass* : Hence they are call'd the Two and Thirty Winds ; and therefore the Four *Cardinal-Points*, *North*, *South*, *East*, and *West*, are call'd *Cardinal-Winds*.

WINDLASS, is an Instrument, in small Ships, placed upon the Deck, just abaft the *Fore-Mast*. 'Tis made of a Piece of Timber having Six or Eight Squares, and is in the Form of an *Axle-Tree*, whose Length is placed Horizontally upon Two Pieces of Wood at the Ends thereof, and upon which it's turn'd about by the Help of *Handspikes*, put into Holes made for that Purpose : This



This Instrument, serves for Weighing of Anchors, or Hoisting of any Weight in or out of the Ship; and will Purchase much more than any Capstan, and that without any Danger to those that Heave: For if in heaving the *Windlass* about, any of the *Hanks* should happen to break, yet the *Windlass* would paul of it self.

*Trade-WINDS*; the *General Trade Winds*, are those which blow perpetually from the *East*, between the Latitudes of 30 Degrees North and South, in the *Atlantic*, *Ethiopic*, and *Pacific Oceans*; But that to the Northward of the *Equator*, inclines to the Northward of the *East*; and that to the Southward of the *Equator*, to the Southward of the *East*:

Which is thus Accounted for by Mr. *Halley*, from the Laws of *Statics*: The *Air* which is less Rarified or Expanded by Heat, and consequently, more Ponderous, must have a Motion towards those Parts thereof, which are more Rarified and less Ponderous, to bring it to an *Æquilibrium*: And the Presence of the *Sun* continually shifting to the Westward, that Part towards which the *Air* tends, by reason of the Rarification made by his greatest Meridian Heat, is with him carried Westward, and consequently the Tendency of the whole Body of

the Lower Air is that way. Thus a general *Easterly Wind* is form'd, which being impress'd upon all the Air of a Vast Ocean, the Parts impel one the other, and so keep moving till the next Return of the *Sun*; whereby so much of the Motion as was lost, is again restor'd: Thus the *Easterly Wind* is made perpetual.

And since near the *Line*, the Air is much more Rarified, than at a greater Distance from it; because the *Sun* is twice in a Year Vertical there, and at no time distant above 23 Degrees and a half; at which Distance the Heat, being as the Sine of the *Angle of Incidence*, is but little short of that of the Perpendicular Ray. Whereas, under the Tropics, tho' the *Sun* stay long Vertical, yet he is as long 47 Degrees off; which is a kind of Winter, wherein the Air so Cools, as that the Summer-Heat cannot warm it to the same Degree with that under the *Equator*. Wherefore the Air to the Northwards and Southwards, being less Rarified than that in the Middle, it follows, that from both Sides it ought to tend towards the *Equator*: This Motion compounded with the former *Easterly Wind*, answers all the *Phænomena* of the *General Trade-Winds*; which, if the whole Surface of the Globe were Sea, would undoubtedly bow all round the World, as they are found to

do in the *Atlantic* and *Ethiopic Oceans*.

**COASTING-TRADE-WINDS**, are such as the *Southerly* and *South-Westerly Winds*, which blow perpetually all along the Coast of *Africa* on the Southward of the *Equator* within the *Trade-Wind Limits*: and the *Northerly* and *North-Westerly Winds* on the North Side of the *Equator*, blowing on the same Continent.

**SHIFTING-TRADE-WINDS**, the same with *Monsoons*; which See.

*Note*, That from the Original View of these *Winds* given by Mr. *Halley*; they have bin lately represented on a Large and Correct *Mercator's Chart* of the *World*; as also on a New *Terrestrial-Globe*, both being carefully done by *Char. Price*, and *Fer. Sellers*, *Hydrographers*, at the *Hermitage-Stairs*.

To **WIND** a *Ship*, or *Boat*; that is, to bring the *Ship*, or *Boat's Head* about.

*How WINDS Ship?* that is, Upon what Point of the *Compass* does she lie with her *Head*.

To **WIND** up; that is when the *Ship* comes to *Ride* at an *Anchor*.

**Eddy-WIND**. See *Eddy*.  
*Side-Wind*, is that which blows *Sideward*.

**WINDWARD** of *Ship*; that is, to the *Wind* of a *Ship*.

To have the **WIND** of a *Ship*; that is, to be to *Windward* of her.

**WINDWARD-Tide**. See *Tide*.

**Large-WIND**: As, to *Sail* with a *Large Wind*; that is, with a *Fair Wind*.

**Quarter-WIND**. See *Quarter*.

**Touch the WIND**. See *Touch*.

**WIND-Taught**: As, too much *Rigging*, and high *Masts*, &c. is said to hold the *Ship Wind-taught*, and this makes her *stoop* too much in her *Sailing* in a *Stiff Gale* of *Wind*.

And when a *Ship* *Rides* in in any *Main-Stress* of *Wind* and *Weather*, the *Yards* are brought alongst *Ship*, and the *Top-Masts* are struck down, which else would hold much *Wind*, or be *Wind-Taught*.

**WINDING-Tackle**. See *Tackle*.

To *Ride* **WIND-Road**. See *Ride*.

The **WIND** *Veers*. See *Veers*.

**WOOD** and **WOOD**; that is said, when Two Pieces of *Timber*; being so let into each other, that the *Wood* of the one joins close to the other. See *Scarfed*.

**WORKING-PART** of *Navigation*. See *Navigation*.

**WORMING**, is laying a small *Line* or *Rope* all along betwixt the *Strouds* of any *Cable* or *Hawser*, in order to strengthen or succour it-



To *WOULD*, or to Bind; as to *would a Mast*, or *Yard*; is the winding of Ropes fast about a Mast, or *Yard* that is fish'd, in order to make it hold the better.

*WRACK*, *Ship-wrack*, is a Sea-Term, when a Ship either splits or sinks; and those that escape, are said to *have suffer'd Shipwrack*.

*WRIGHT's*, or *Mercator's Sailing*, is the Method of finding on a Plane, the Place of a Ship upon any assign'd *Course*, true in *Longitude*, *Latitude*, and *Distance*; the *Meridians* being supposed Parallel, and the *Parallels of Latitude* straight Lines.

## CASE I.

Given, the *Latitude* and *Longitude* of two Places;

Required? *Course*, *Distance*, and *Departure*.

1. To find the *Course*, say,

As the Meridional Difference of *Latitude*,

To the *Radius*:

So is the Difference of *Longitude*,

To the *Tangent* of the *Course*.

2. Find the *Distance* and *Departure* by Case 3. of *Plain-Sailing*.

## CASE 2.

Given, the *Latitudes* and *Course*;

Required? *Difference of Longitude*, *Distance*, and *Departure*.

1. To find the *Difference of Longitude*, say,

As the *Radius*,

To Meridional Difference of *Latitude*:

So is the *Tangent* of the *Course*,

To the *Difference of Longitude*.

2. Find the *Distance* and *Departure* by Case 3. of *Plain Sailing*.

## CASE 3.

Given, the *Latitudes* and *Distance*;

Required? *Course*, *Difference of Longitude*, and *Departure*.

1. Find the *Course* and *Departure* of Case 5. of *Plain Sailing*.

2. Find the *Difference of Longitude*, by Case 2. of this: Or by saying,

As the *Difference of Latitude*,

To the *Departure*:

So

So is the Meridional Difference of Latitude,  
To the Tangent of the Course.

## CASE 4.

Given, Latitudes and Departure.  
Requir'd? Difference of Longitude, Course, and Distance.

1. Find the Difference of Longitude, by Case 3. of this.
2. Find Course and Distance, by Case 6. of Plain-Sailing.

## CASE 5.

Given, One Latitude, Course, and Distance.

Requir'd? Difference of Latitude, and Difference of Longitude.

1. Find the Difference of Latitude, by Case 1. of Plain-Sailing.
2. Find the Difference of Longitude, by Case 2. of this.

## CASE 6.

Given, One Latitude, Course, and Departure.

Requir'd? Distance, Difference of Latitude, and Difference of Longitude.

1. Find the Distance and Difference of Latitude, by Case 2. of Plain-Sailing.
2. To find the Difference of Longitude, say,

As the Difference of Latitude,  
To Meridional Difference of Latitude,

So is the Departure,  
To the Difference of Longitude.

## CASE 7.

Given, One Latitude, Distance, and Departure.

Requir'd? Course, Difference of Latitude, and Difference of Longitude.

1. Find the Course and Difference of Latitude, by Case 4. of Plain-Sailing.
2. Find the Difference of Longitude, by Case 2. or 6. of this.

## CASE 8.

Given, One Latitude, Course, and Difference of Longitude.

Requir'd? Difference of Latitude, Distance, and Departure.

1. To find the Difference of Latitude, say,

As the Radius

To the Difference of Longitude :

So is the Co-Tangent of the Course,

To the Meridional Difference of Latitude.

2. Find the Distance and Departure, by Case 3. of Plain-Sailing.



## Y

**Y**ARDS of a Ship, are those long Pieces of Timber which are made a little Tapering at each End, and are fitted each a-thwart its proper Mast, with the Sails made fast to them; so as to be Hois'd up, or Lower'd down, as Occasion serves. They have their Names from the Masts unto which they belong.

As for the Length of the *Main-Yard*, 'tis usually  $\frac{5}{6}$  of the Length of the *Keel*, or  $\frac{6}{7}$  of the Length of the *Main-Mast*.

Their *Toickness* is commonly  $\frac{3}{4}$  of an Inch for every Yard in Length.

The Length of the *Main-Top-Yard* is  $\frac{2}{5}$  of the *Main-Yard*: And the Length of the *Fore-Yard*, according to some, is  $\frac{4}{5}$  of the *Main-Yard*; but by others,  $\frac{3}{5}$  thereof.

The *Spritsail-Yard*, and *Cross-Jack-Yard*, are of the same Length; that is to say,  $\frac{1}{2}$  the *Mizen-Yard*.

And the *Toickness* of the *Mizen-Yard* and *Spritsail-Yard* is  $\frac{1}{2}$  an Inch for every Yard in Length.

All Small *Yards* are Half the Great *Yards* from Cleat to Cleat.

When a *Yard* is down a *Port-laft*, it gives the Length of all *Top-sail-Sheats*, *Lifts*, *Ties*, and *Bunt-Lines*; as also, of the *Leech-Lines* and *Halliards*, measuring from the *Hunds* to the *Deck*: And when it is Hois'd, it gives the Length of *Clew-Lines*, *Clew-Garnets*, *Braces*, *Tackles*, *Sheats*, and *Bow-Lines*.

And if all Ships were Built after one and the same Mould; and all their *Masts*, *Yards*, *Cables*, *Cordage* and *Sails*, were of like Goodness, a Methodical Rule of their Proportion might be given: But since their Length, Breadth, Depths, Rakes and Burthens are so variable and different; it is hardly possible to give any certain Rules, which may be taken as Standard: Tho', in Time, we may expect more Regularity in the Method of Building Ships, that is, when the *Theory* thereof is better known and minded.

**YARD-ARM**, is that half of the *Yard* that is on either side of the *Mast*, when they lie a-thwart the Ship.

**Brace the Yard!** That is, Traverse aft the *Yard-Arm*, whose *Brace* is haled.

**Square the Yards!** That is, See that they hang right a-cross the Ship, and one *Yard-Arm* not Travers'd more than another.

**Up the Yards!** That is, Make the *Yards* stand Even: For to Top the *Main* and *Fore-Yards*, the *Clew-Lines* are the most

most proper ; but when the Top-sails are Stow'd, then the Top-sail-Sheats will Top them.

**YARE** : As, *Be Yare at the Helm !* That is, Be Quick, Ready, and Expeditious at the Helm.

**YARE**, is sometimes used by Seamen for Bright : As, *To keep his Arms Yare* ; that is, to keep them Clean, and Bright.

**YARN**, as *Rope-Yarn* ; by this is meant the *Yarn* of any Rope untwisted : 'Tis usually made of Cables-Ends which are worn out. It's Use is, to serve small Ropes, to make Sinners, Mats, Plats, and Caburns. It serves also to fasten the Sails to the Yard-Arms, with several other Uses.

*Spun-YARN*, is nothing but *Rope-Yarn* made small at the Ends, and so spun one to another with a Winch, as long as One would have it.

**YATCHES**, are One-Deck'd Vessels, carrying Four, Eight, or Twelve *Guns* ; with Thirty or 40 *Men* ; and from Thirty, to an Hundred and sixty *Tuns* : They have the Gun-Deck from Thirty to Sixty three *Feet* Long, and from Thirteen to Twenty-one *Feet* Broad. They Draw little Water ; and are Excellent for running of small Boards,

making short Trips. They generally serve for carrying of Persons of Quality, &c.

**YAWS** : As, *The Ship makes Yaws* ; that is, does not Steer steady, but goes in and out when there is a stiff Gale. And he that keeps the Ship most from *Yawing*, does commonly use the least Motion with the Helm, and those Steer best.

**YOKE**, *Sea-Yoke* : When the *Sea* is so Rough, that the Men cannot govern the Helm with their Hands, then they seize two Blocks to the End of the Helm, one on each side, and reeving two small Ropes thro' them, which they call Falls, and which are made fast to the Sides of the Ship : By having some Men at each Tackle, they govern the Helm according to Direction : This they call a *Yoke* to Steer by.

And sometimes, Seamen make a *Yoke*, by taking a double Turn about the End of the Helm by a single Rope, the Ends being laid to the Ship's Sides ; and by this means they guide the Helm.

**YOUNKERS**, are those Young-Men on-board a Ship, that Take in the Top-sails, and are for Furling the Sails, Slinging the Yards, Bowsing, Tricing, &c.



## Z

**Z**ENITH, is the Point in the Heavens, right-over One's Head; or is the Upper Pole of the *Horizon*; and therefore is 90 Degrees every way distant from it.

**ZENITH-Distance**, is the Complement of the *Sun* or *Star's Meridian Altitude*; that is, what the *Meridian Altitude* wants of 90 Degrees.

**ZONE**: The Surface of the *Terraqueous Globe*, was by the Ancients divided into Five Zones; that is to say, One *Torrid* or *Burning Zone*, Two *Temperate*, and Two *Frigid* or *Frozen Zones*.

*Torrid* or *Burning ZONE*, contains all that Space that lies between the Two *Tropics*.

*Temperate ZONES*, are, one on the *South* side of the *Equator*, between the *Antarctic Circle* and the *Tropic of Capricorn*; the other on the *North* side of the *Equator*, between the *Arctic Circle* and the *Tropic of Cancer*.

*Frozen ZONES*, are comprehended between the *Polar Circles* and the *Pole*: And therefore the

*Northern Frozen ZONE*, lying between the *Arctic Circle*, or the *Parallel* of 67 deg. 30 min. *North Latitude*, and the *Arctic Pole*, contains *Nova-Zembla*, and Part of *Greenland*, *Samojeda*, *Finmark*, *Lapland*, *Norway*, *Island*, and some Parts of *North-America*.

*Southern Frozen ZONE*, lying between the *Antarctic Circle* and the *Antarctic* or *South Pole*, is not yet known whether it contains *Land* or *Sea*.

## F I N I S.



For **EASTERN Amplitude**, read *Eastern Magnetic Amplitude*.

# PROPOSALS

## For Printing

A Compleat HISTORY of ENGLAND,  
from the Earliest Account of Time, to the Death of  
His Late Majesty King WILLIAM the Third:  
Containing a Faithful Relation of all Affairs of State,  
Ecclesiastical and Civil; with the Effigies of all the  
Kings and Queens, taken from the Originals, and  
Curiously Engrav'd by the best Masters.

MANY have been the Attempts, by Great Men, to make a Compleat History of the Lives of the Kings of England; but they have all been Disappointed, either by unavoidable Avocations, Sickness, Death, or many times want of Resolution, being Discourag'd with the Prospect of so vast a Work; even the Learned Mr. Camden confesses the Task too weighty, and so confin'd himself to the History of Queen Elizabeth, which Reign alone cost him Sixteen Years Labour, tho' he had all the Materials before him, and was an Eye-witness of most Transactions. There being little hopes therefore ever to see a Design of this Nature compleated by One Man, we have taken another Method, which is, by uniting the Labours of Several, who being Men of great Reputation, and living in or near the Times of those Princes whose Reigns they writ, had better Opportunities of thoroughly informing themselves. This is the Way which Sir William Temple, and several other Learned Men, approv'd and recommended, and which has been above seven Years Carrying on with great Application, and is now Ready for the Press.

*The Method and Authors made use of, are as follow:*

- I. Milton's History of England, to the Conquest.
- II. From the Conquest, to the End of the Reign of K. Edward III. by Mr. Daniel.
- III. The Reigns of K. Richard the II<sup>d</sup>. K. Henry IV<sup>th</sup>, V<sup>th</sup>, and VI<sup>th</sup>, are all new writ in Mr. Daniel's Method; Mr. Trussel's Performance not having met with such Approbation as Mr. Milton's and Mr. Daniel's, we chose therefore to be at the Charge of writing those Lives a-new, to make the Work all of a Piece.

IV. The



IV. The Reign of K. *Edward* the IVth, is excellently well writ by Mr. *Habington*.

V. The Lives of K. *Edward* the Vth, and K. *Richard* the III. by Sir *Thomas Moore*; and that also of the last by Mr. *Buck*, have met with a general Esteem, answerable to the Characters of the Authors.

VI. The Reign of K. *Henry* the VIIth. by the Lord *Bacon*; as also the Annals of the said King, writ by Sir *Fa. Ware* (chiefly relating to *Ireland*, and which he publish'd to supply some Defects in the Lord *Bacon's* History) we have translated, keeping each Author by himself.

VII. The Reign of K. *Henry* the VIIIth. by the Lord *Herbert*.

VIII. The Reign of King *Edward* the VIth, and Queen *Mary*, by Bishop *Godwin*, Sir *John Heyward*, and Others.

IX. The Reign of Queen *Elizabeth*, by Mr. *Camden*; but this being originally writ in Latin by the Author, we have it new translated by a good Hand, it having suffer'd very much by the two former Translators.

X. The Reign of King *James* the 1st. by Mr. *Wilson*; which Author being suspected of some Partiality, we have had him carefully examin'd throughout; and tho' we have kept his Text entire as he writ it, have added several considerable Observations, which which will set all the Matters of Fact in a true Light.

N.B. This Reign was intended to be writ by Mr. *Camden*, but he only drew a Plan of his Design, and left some short Memorials of it, which shall be here Printed.

XI. The Reigns of K. *Charles* the 1st. and 2d. King *James* the 2d. King *William* and Queen *Mary*, are new writ by a Learned and Impartial Hand.

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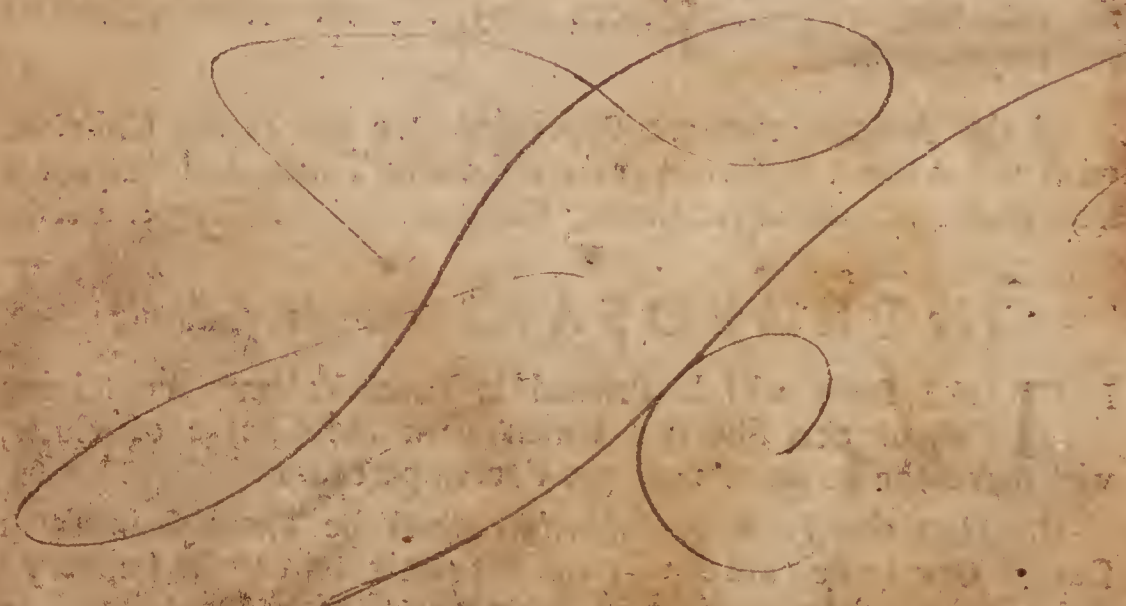
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1-1

Life how short  
Clarity how long



*[Faint, illegible handwriting, possibly bleed-through from the reverse side of the page]*











